Antitrust

Spring 2020
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SUMMATIVE PROJECT

NOTE:

This summative project is being provided in lieu of a final examination pursuant to arrangements made on account of the ongoing coronavirus pandemic (SARS-CoV-2, COVID-19).

INSTRUCTIONS:

1. Your goal is to show your mastery of the material presented in the course and your skills in analyzing legal problems. This is what you will be evaluated on.

2. Unless otherwise provided, assume hypothetical facts take place within the present-day United States, and base your legal analysis on the law, rules, procedures, practices, and cases from the course.

3. Failure to comply with any of the following instructions, even if inadvertent, will be grounds for any of the following at the instructor's discretion: a substantial penalty assessed in the grading of the summative project, a grade of U for the course, a referral for academic misconduct.

4. Your response must be in the form of a PDF or DOCX document with U.S. letter dimensions (8.5 by 11 inches) with 1.5-inch margins all around using 12-point Arial font with line spacing set at single. (If you don't have Arial, use a similar sans-serif typeface.) Bolding, underlining, and italics are left to your sound discretion. You must print your exam number at the very top of your response.

   a. *Request:* I would be very grateful if you would use the template provided here:

      http://www.ericejohnson.com/courses/antitrust_20/m/Antitrust_summative_project_response_template.docx

      (The template, if you don't mess with it, will ensure you have the right formatting.) But if you don't or can't use it, that's okay. Just make sure you get the margins, font, and line spacing correct.

   b. If you're using the template, replace the "000" at the top with your exam number.

   c. *Request:* I would be very grateful if you would replace the 000 in the template's footer with you exam number. If you don't know how to do this, however, or if it doesn't work, don't worry about it.

5. You may not waive anonymity. You must not put your name or any personally identifying information within the body of the response except your exam number.

6. You may not collaborate with anyone or get anyone's help in composing your response except to the extent you are getting technical help with regard to using software as necessary to do your response and turn it in.

7. **You may not spend more than an aggregate of eight hours composing your response.** You can stop and start. That is to say, you can work on the summative project for a while and then stop the clock and do something else. But when you pick it back up, the clock starts again. The time limit includes, for instance, time you spend reading the questions, time you spend writing, time you spend making notes on scratch paper, and time you spend looking up answers. The time limit does not include time spent reading these instructions or trying to upload your response to Canvas.

8. Communicate nothing about the summative project, including even vague impressions or characterizations, to any member of the class until after May 8, 2020.

9. Organization counts. I advise you to read all the questions before answering any of them — that way you can be sure to put all of your material in the right places.

10. Clarity counts. Clearly label each question separately in your answer.

11. Word counts: Since your response to this summative project will be limited by word counts, we are going to need some rules for that. Thus:

a. For questions 1 through 6, the phrase "_____ words" should be the first thing under each question heading in your response, where the blank is replaced by the word count for the words appearing under that question heading. The word count for the response should not include the two words represented by the word count report itself.

b. For questions 7 through 25 (the short-answer questions), don't provide a word-count report.

c. Because computer-based word counters differ in how they treat groups of letters with internal punctuation marks, refrain from using groups of letters with internal punctuation marks. (The exception is apostrophes. Apostrophes are fine.) Refrain from using hyphens, dashes, or slashes in any aspect of your response. (For instance, don't use "per-se illegal." Instead use "per se illegal." And don't use any abbreviation with internal periods in any aspect of your response. (For instance, don't use "U.S.A." Instead use "USA" without periods.)

d. Do not use abbreviations as a way of gaming the word count. You can use regular abbreviations for entities. For instance, you can use "FTC" for the Federal Trade Commission, "DOJ" for the U.S. Department of Justice, and "US" for the United States. (And you can use those on first reference, because I will recognize those.) But do not create abbreviations for phrases. Thus, for example, do not use "DWL" for deadweight loss or "ROR" for rule of reason.

e. When you get to Question 6, feel free to use the abbreviations set out within the problem itself (JV, AA, II, PPP, BB, and so forth).

f. Any response that goes over the word count will be heavily penalized in grading and may be given zero points in my discretion.

g. Any response that does not comply with instructions regarding word count (such as gaming using abbreviations) will presumptively be given no credit and may incur additional penalties in grading to be assessed against the remainder of the summative project.

h. I will be independently checking word counts. Inaccurate self-reported word counts will presumptively be treated as academic misconduct.

i. Word count limits are limits. They are not minimums or recommended amounts. If you can answer well with fewer words, please go ahead.

j. Remember, the class is graded S/U. So let the word count be your friend in preventing this summative project from becoming needlessly burdensome. And to the extent you wrote too much and will have to cut your response down to make it fit, the thinking involved in doing so will likely be productive and educational.

12. The summative project is **"open book."** You may reference your own notes, slides, the Elhauge book, the economics book, etc. And you can access the class webpage and any materials hosted on ericejohnson.com. But other than that, do not engage in any internet or database research in composing your response. You can use a dictionary and a calculator if you like, including those that exist as software on a computer or other electronic device.

13. **You must upload your response to Canvas by noon May 8, 2020.** You should be able to use the following link to get to the upload portal:

https://canvas.ou.edu/courses/204466/assignments/1222124?module_item_id=2578262

If that link does not work, you can find the place to upload your response as follows: Log into Canvas. Go to the "Spring 2020 COL Exams" Canvas course. Navigate to modules. The upload portal for Antitrust will be listed under the module titled "Flexibly Scheduled Exams."

If you have trouble with Canvas, follow up with College of Law staff. Do not e-mail your response to me as that would compromise anonymity.

Don't wait until the last minute. Again, the course is graded S/U. So I advise you to get it done and get it uploaded sooner rather than later.

14. This summative project is meant to be as much a learning exercise as an assessment instrument. I hope it will be challenging, enjoyable, and even fun. Thank you for a fantastic semester! Please take care of yourselves and stay safe and well.

DON'T TURN THE PAGE AND START READING UNTIL YOU ARE READY TO BEGIN YOUR EIGHT HOURS.

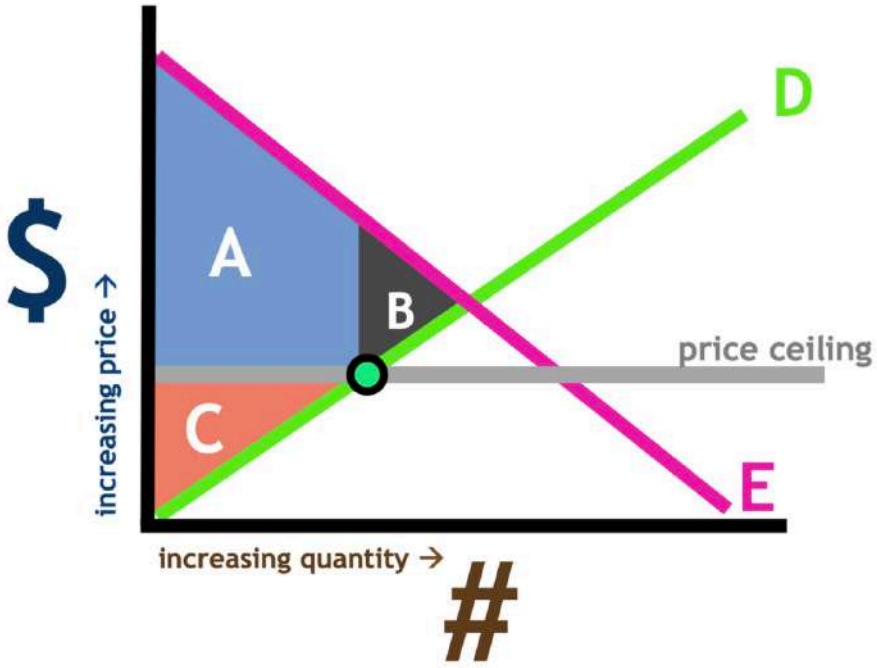
AT THE VERY TOP OF YOUR RESPONSE PUT YOUR EXAM NUMBER. DO NOT USE YOUR NAME.

SET-UP FOR QUESTIONS 1 AND 2:

For these questions, you will need to hypothesize a product and some buyers and sellers. Your object will be to tell some realistic stories about what the following diagram could be said to represent.

Assume that following diagram is a standard supply-and-demand diagram, in which the vertical axis represents price, which increases going upward, and the horizontal axis represents quantity, which increases going to the right. Assume that the assignment of the letters A, B, C, D, and E is arbitrary, and assume also that the colors on the graph are arbitrary.

Note that this diagram depicts a price ceiling. You can assume this price ceiling is effective and has been imposed by law.



By the way, the diagram you see here was taken from the amalgamated multiple choice question from the Exam Archive. There's no need to find it there. I am just noting that for the sake of transparency.

QUESTION 1:

Tell me a story, using **no more than 250 words**, about a buyer and seller that successfully transacted. Make your story unique, and use a product and situation that is different from any examples used in class or in any of our materials. For the buyer and the seller each, explain whether they came out better or worse than they would have without the price ceiling. Explain their story with reference to the graph on the preceding page.

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

QUESTION 2:

Tell me a story, using **no more than 250 words**, about a buyer and seller that did **not** successfully transact. You can re-use the product and portions of the situation from Question 1; again, just make sure it's different from examples used in class or in any of our materials. For the buyer and the seller each, explain whether they came out better or worse than they would have without the price ceiling. Explain their story with reference to the graph on the preceding page.

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

QUESTION 3:

Using **no more than 250 words**, give me a realistic hypothetical situation in which there is only one producer in a market because of certain characteristics of the long-run average cost curve and demand. What would you expect to happen to consumer prices relative to marginal cost in such a market?

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

SET-UP FOR QUESTIONS 4 AND 5:

For these two questions, you will be asked to write a hypothetical involving horizontal restraints and then to provide analysis of your own hypothetical.

QUESTION 4:

Write a law-school exam-style hypothetical, using **no more than 500 words**, that sets up issues involving a horizontal restraint. The horizontal restraint should be one that arguably fits and doesn't fit within a per se unlawful category. Your hypothetical should provide some facts that are useful for the plaintiff's side in rule of reason analysis. And your hypothetical should provide some facts that are useful for the defendant's side in rule of reason analysis.

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

QUESTION 5:

Write a law-school exam-style response, using **no more than 700 words**, to the hypothetical you drafted above for Question 4, providing analysis for whether the conduct gives rise to liability under Sherman Act §1. The response should offer arguments on both sides for the proposition that the restraint at issue does and does not fall within per se illegal conduct. The response should then move on to rule of reason analysis.

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

SET-UP FOR QUESTION 6:

What follows is a hypothetical set of facts and a hypothetical student response to a hypothetical question. Your task will be to critique that hypothetical student response.

The hypothetical set of facts—"Rainbow Laser Unicorns"—is an abridgement and modification of the 2019 final examination for Antitrust. The hypothetical student response, attributed to hypothetical student Bob Bealins, is based in part on an amalgam of actual student exam responses to the 2019 exam.

Note that the full 2019 exam is posted online in my Exam Archive, but I do not recommend you look at it, since doing so would likely be confusing. Everything you need is reproduced right here.

HERE ARE THE HYPOTHETICAL FACTS:

Rainbow Laser Unicorns

"Laser" stands for Light Amplification by Stimulated Emission of Radiation. Other light sources—such as light bulbs or LEDs—take an input of energy and use that to radiate light as a dispersed glow. A laser, by contrast, takes an input of energy and uses that to emit light in a narrow, coherent beam.

Every laser requires, at its core, a lasing medium. An energy source pumps energy into the lasing medium. Then the lasing medium, owing to its chemical/physical properties, emits that energy as coherent light.

Most lasers emit only light of a particular wavelength, which, in the visible spectrum, corresponds to light of a particular color of the rainbow. So, for instance, a laser that emits all of its light at 635 nanometers is a particular hue of red. Engineers have succeeded, however, in creating broad-spectrum lasers. The first kind of broad-spectrum laser was the free-electron laser, which can be tuned to different wavelengths—red, blue, orange, violet, or whatever you like. The downside of a free-electron laser is that it requires a large laboratory facility since the lasing medium is a cloud of free electrons, and creating that requires a particle accelerator, which in turn requires an array of vacuum pumps. Thus, free-electron lasers are wildly expensive, bulky, and prone to mechanical breakdown—not a recipe for commercial success.

Less than a decade ago, however, a new kind of broad-spectrum laser was developed whose lasing medium is a sapphire crystal doped with the rare-earth metal scandium. These scandium-sapphire-crystal lasers—often called "SSC lasers" by scientists or "rainbow lasers" by the press—can be made small enough to fit in a pocket, and yet they can be tuned to emit light in any particular color—or even all of the colors of the rainbow at once to create a form of white light that is similar to visible sunlight. What is more, it is possible for the color of the laser's light to be changed as quickly as a billion times per second.

SSC lasers have found two commercial applications so far: (1) digital-cinema projectors and (2) scientific laboratory equipment that determines the chemical composition of a substance.

The digital cinema market is what most people think of when they think of SSC lasers. The capacity for SSC lasers to emit many millions of visible colors per second has made it the key piece of technology in a new generation of digital cinema projectors with massively increased color range and brightness plus the ability to project images onto larger screens across longer distances.

While less visible to the public, the revolution in analytical laboratory equipment through the use of SSC lasers is no less exciting. Laboratory researchers often need to know the chemical composition of a substance. There are many techniques and kinds of machines for accomplishing this, most of which require destroying a small portion of the sample. SSC lasers have been revolutionary because they've allowed for the development of a new kind of laboratory analyzer known as a "lemdar" analyzer. "Lemdar" stands for Laser Enabled Matrix Desorption-Absorption Resonance. Lemdar analyzers—often informally called "lemdars"—are unique in their ability to almost instantly determine the chemical composition of a substance without destroying or degrading the sample. Science has long understood that different chemicals absorb and reflect light of different wavelengths in different ways. But taking full advantage of that effect in order to analyze samples non-destructively was not feasible before SSC lasers. The capacity of an SSC laser to quickly cycle through

FIG. 1: Press reports about Applied Atomics and Iridion Instruments—the so-called "rainbow laser unicorns"—are often accompanied by fanciful images such as this one. This does little to help anyone understand the technology, but business journalists are only human.

millions of wavelengths of light with pinpoint focus on different parts of a sample means that it can provide billions of data points within seconds. When this is compared to a reference database of known chemical compounds, it provides near-instantaneous results. So even though there are other analytical machines for determining the chemical composition of a substance—such as mass spectrometers and gas chromatographs—virtually all university, government, and private research labs agree that there is no substitute for a lemdar analyzer for a vast swath of laboratory activity.

Unfortunately for movie theaters and scientific research laboratories, there are only two manufacturers of scandium-sapphire-crystal lasers: Applied Atomics and Iridion Instruments. Both firms have enjoyed strong revenue growth thanks to their ability to command prices far in excess of their marginal costs. In fact, both companies have become what investors call "unicorns"—privately held firms valued at over $1 billion.

Applied Atomics and Iridion Instruments each have patents relating to SSC lasers. Applied Atomics has the '111 patent, which covers scandium-sapphire crystals as such—meaning the chemical substance used as the lasing medium. Applied Atomics also has the '777 patent, which covers a cheap and efficient way of manufacturing scandium-sapphire crystals. Iridion Instruments has the '222 patent, which covers a laser that uses a scandium-sapphire crystal as the lasing medium. Iridion Instruments also has the '888 patent, which covers a cheap and efficient way of manufacturing scandium-sapphire crystals—albeit a completely different way of doing so than is disclosed in Applied Atomics' '777 patent.

Some years ago, shortly after Applied Atomics and Iridion Instruments started manufacturing SSC lasers, each sued the other for patent infringement. Specifically, Applied Atomics sued Iridion for infringement of the '111 patent, and Iridion sued Applied Atomics for infringement of the '222 patent. The suits were consolidated and both litigants simultaneously moved for partial summary judgment on the issue of the validity of their own patents. The district court not only denied both of these motions, the court immediately invited both parties to file motions for summary judgment on the issue of the *invalidity* of the other party's patent. When both Applied Atomics and Iridion Instruments declined to file these motions, the court on its own initiative, *sua sponte*, noticed summary judgment motions on the issue of invalidity of both patents. The day before briefs were due, the parties settled for zero dollars and the simple agreement to jointly dismiss their claims.

Since then, neither Applied Atomics nor Iridion Instruments has sued or threatened to sue anyone over the ‘111 patent or the ‘222 patent. But no one else has tried entering the market for SSC lasers—so the issue hasn’t come up. Meanwhile, Applied Atomics and Iridion are both sticking to their own patented methods of manufacturing scandium-sapphire crystals, so neither has had occasion to complain about the other on the basis of the ‘777 or ‘888 patents.

But that’s not to say everyone is happy. There has been plenty of grumbling from the movie theater industry and from research laboratories.

Movie theaters owners are upset that they can’t buy all the SSC-laser projectors they want—even at sky-high prices. Right now, SSC-laser projectors are approximately 55% of all new projectors being purchased by theaters. But in areas where competition is fierce among theaters, including wealthy suburbs of large metropolitan areas, movie theaters are buying nothing but SSC-laser projectors. Theater owners say anything less than a SSC-laser projector will leave their patrons disappointed and looking for a theater that can provide a better cinematic experience. In fact, there’s a backlog of SSC-laser-projector orders, and high-end theaters everywhere are on waiting lists to buy them as soon as they are made. The 45% of cinema projectors being sold that aren’t SSC-powered are being purchased by theaters in smaller cities, by educational institutions, and by second-tier budget theaters that show movies long past their release date at discount ticket prices.

Meanwhile, scientific laboratories are able to get all the lemdar analyzers they can afford. In fact, thousands of units are piling up in unsold inventory even though the factory where they are made operates at only 25% of manufacturing capacity. The problem scientific laboratories face is affording lemdar analyzers.

High-end gas chromatography machines, for instance, which are similar in size to a refrigerator, can go for $100,000 or more. But lemdar analyzers—despite the fact that they are about the size and complexity of a DVD player—retail for about $1 million each. In fact, at an average variable cost of $100 per unit, they aren’t much more expensive than a DVD player to manufacture. That’s led to huge profit margins. The only reason lemdar analyzers haven’t been priced even higher is that market research shows a substantial number of buyers would do without them if priced over $1 million. And that would substantially weaken sales volume. But at $1 million apiece, most university laboratories are buying them because they have become essential to stay competitive against other university labs in applying for large federally funded grants.

Previously, Applied Atomics and Iridion Instruments both made SSC-laser projectors and lemdar analyzers. Applied Atomics sold 60% of SSC-laser projectors and 40% of lemdar analyzers, while Iridion Instruments sold 40% of SSC-laser projectors and 60% of lemdar analyzers. As far as movie theaters and laboratories were concerned, each company’s product was just as good as the other’s. But pursuant to a new joint venture (JV) started a few months ago, the companies have begun specializing in just one product each: only SSC-laser projectors for Applied Atomics, and only lemdar analyzers for Iridion Instruments.

The JV entity is called Jacindor-Joule Corporation. It is owned in equal share by Applied Atomics and Iridion Instruments, and it has taken ownership of the ‘111, ‘222, ‘777, and ‘888 patents. Pursuant to the terms worked out in the JV agreement, Jacindor-Joule provides the following exclusive licenses: The ‘777 method is exclusively licensed to Applied Atomics; the ‘888 method is exclusively licensed to Iridion

Instruments; the ‘111 and ‘222 patents are exclusively licensed to Applied Atomics for applications relating to cinema projectors and yet-to-be-developed image projection applications; and the ‘111 and ‘222 patents are exclusively licensed to Iridion for applications relating to lemdar analyzers. In the meantime, Jacindor-Joule has received $100 million of paid-in capital from each of the joint venturers and will use that capital to engage in research and development work to find new applications for scandium-sapphire-crystal lasers other than image projection and chemical analysis. Profits that result from new applications of SSC lasers will be split equally between Applied Atomics and Iridion Instruments as equal co-owners.

Since the creation of the joint venture, it is hard to say if the prices of lemdar analyzers have gone up. It’s hard to say because, previously, lemdar analyzers were sold separately from subscription access to the reference database that enables lemdar data to provide definitive chemical identifications. There had been three different providers of reference-database subscription access, of which Iridion was one. Since the JV, however, Iridion now sells a lemdar analyzer only in combination with access to the Iridion reference database for the life of the analyzer. So the price has gone up somewhat, but with access to Iridion’s database now included, labs have stopped subscribing to the other databases, and the total cost to purchasers of new lemdar analyzers has become a little lower overall. Iridion’s CEO recently explained at an industry conference that bundling database access with the analyzers will allow Iridion to grow the database so as to deliver more value to customers: Whenever a new substance is not recognized based on its lemdar signature, but where the chemical composition can be determined some other way, a lab will end up contributing to Iridion’s database just by entering the information in the lab’s own analyzer. This will enable the Iridion database to grow over time, becoming more useful to researchers everywhere.

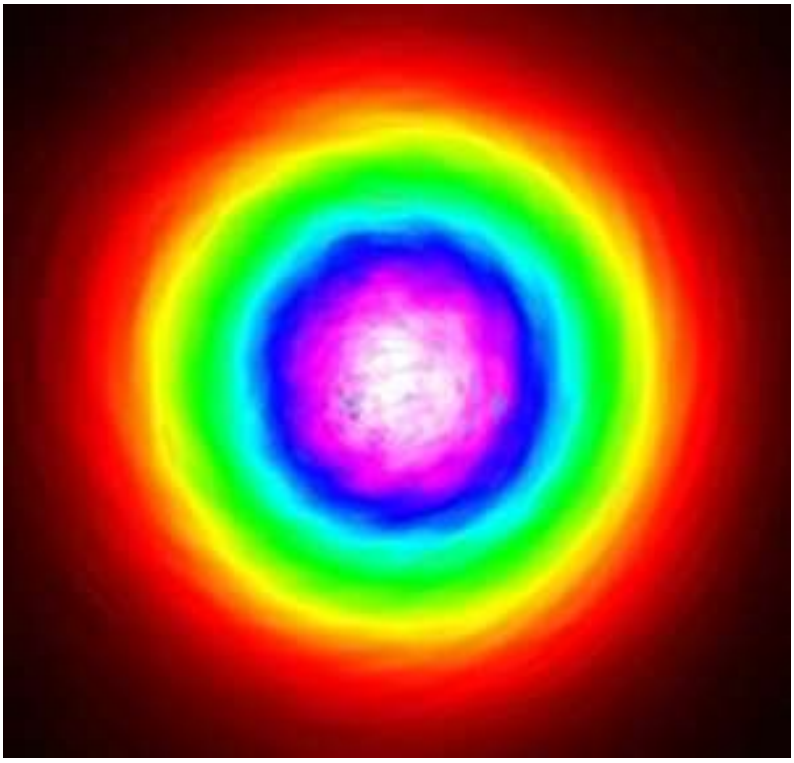


FIG. 2: This image was one of the first created with an SSC laser. The image shows off the device’s ability to produce light of different wavelengths and, therefore, different visible colors. (Image credit: Applied Atomics.)

Iridion's database initiative caused some laboratory researchers to complain about wanting to keep confidential the identity of new chemical compounds they analyze. Iridion has responded to this concern with what it calls the Premium Proprietary Package, which allows labs to pay an additional fee in return for keeping secret new chemical identities that they input for their own use—keeping them out of the general database that is common to all Iridion lemdar users. Iridion has said this arrangement is socially beneficial because, by default, it encourages openness, which should advance scientific research, but it nonetheless allows closed-access proprietary research that incentivizes innovation by allowing participating firms to reap a greater return on their research-and-development spending.

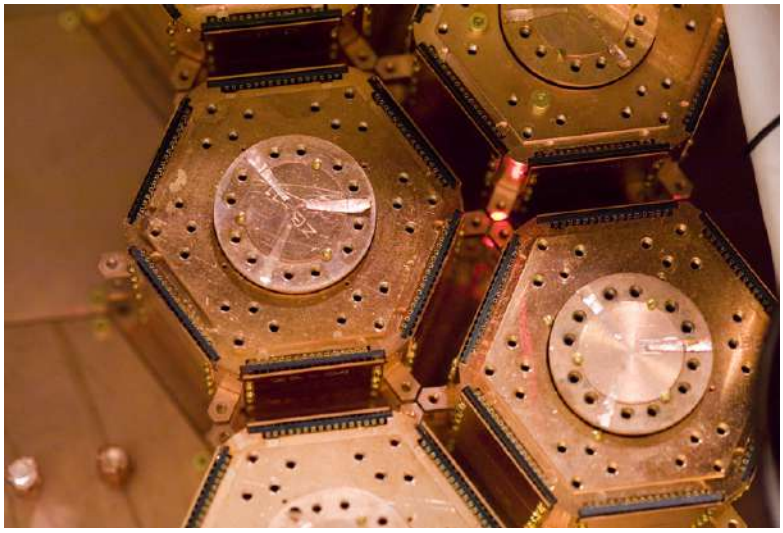


FIG. 3: Iridion Instruments manufactures scandium-sapphire crystals in these hexagonal copper-alloy pressure chambers using the method covered by the '888 patent. (Image credit: Iridion Instruments.)

One potential rival company—Hexetron Halogen—researched the issue of entering into competition with Jacindor-Joule. Hexetron has said it would need to spend $220 million on a new manufacturing facility and millions more operating it. In addition, Hexetron has said it would have to put aside what could be tens of millions of dollars to fight anticipated patent litigation brought by Jacindor-Joule on the basis of the '111 and '222 patents.

Some possibly helpful abbreviations:

AA	Applied Atomics
HH	Hexetron Halogen
II	Iridion Instruments
JJ	Jacindor-Joule
PPP	Premium Proprietary Package
SSC	scandium-sapphire crystal

WHAT FOLLOWS IS THE HYPOTHETICAL RESPONSE OF STUDENT BOB BEALINS TO THIS QUESTION: "Discuss the prospects for liability with regard to monopolization under §2 of the Sherman Act. Include discussion of liability of Jacindor-Joule, and its participants in forming it. Also include discussion of the prospects for liability of Iridion Instruments under §2 of the Sherman Act with regard to its unilateral actions related to reference database access."

LIABILITY FOR MONOPOLIZATION UNDER SHERMAN ACT §2:

First element - monopoly power in the relevant market:

One relevant product market is cinema projectors. A plaintiff would try to argue that the relevant product market is SSC projectors, since many consumers, such as those in wealthy suburbs, wouldn't substitute an SSC projector for a traditional projector. But actual consumer choice is irrelevant. They could substitute them if they wanted to, since all projectors project images and thus could theoretically be substituted for one another. That means the relevant product market is cinema projectors. Remember, it's not enough to show monopoly power in "a" relevant market. The plaintiff has to show monopoly power in "the" relevant market.

The relevant geographical market doesn't apply, since these projectors seem to be sold all over the USA or world. The relevant geographical market couldn't be "the whole United States" or "the whole world," as that doesn't make sense. So a court would skip that part.

Now we come to market share. Applied Atomics has approximately 55% of all cinema projector sales. This is probably too low for monopoly power. But it is possible, though very unlikely, that 55% could be monopoly power.

Assuming that 55% could possibly be enough market share for monopoly power, we look to barriers to entry. There are essentially no barriers to entry, because even though it might be extremely difficult for a potential competitor to enter into competition over SSC projectors, there's apparently no barrier to entry to making regular old cinema projectors.

Given all of this, it is clear that Applied Atomics lacks monopoly power in projectors.

Lemdars are the relevant market for Iridion. Here, a plaintiff will have better prospects for success because the JV has led to the total monopolization of the market for lemdars by Iridion.

As to geographic market, once again it's the United States or the world.

The product market is best understood to be lemdars themselves because they have no meaningful substitutes. The reason they have no substitutes is because labs consider lemdars essential to compete for federal grants and are of the view that there is "no substitute for a lemdar" for an important swath of laboratory activity.

Then, because Iridion has 100% of this market, that is obviously enough market share for monopoly power.

But there is a persuasive counter argument available: Monopoly power is the power to control prices. The facts say that market research has shown that the manufacturer can't raise the price above $1 million, because if they do so, buyers will flee. That means that Iridion doesn't have total control over prices. Thus there is solid economic reasoning for rejecting the idea that lemdars are a separate, relevant product market. In that case all analyzers would be the relevant product market.

Either way, we move on to barriers to entry. One possible barrier to entry is the 111 and 222 patents. These seem to be incredibly weak patents. In the pre-JV patent

litigation, the court itself actually moved for summary judgment on the issue of invalidity of both patents. This suggests they are extremely vulnerable to challenge. And, of course, once a patent is held invalid in litigation against one party, it becomes useless in any future litigation. No wonder both Applied Atomics and Iridion quickly settled. Then, instead of using their patents to sue for infringement, the parties used them as an excuse to form a joint venture. Like the *New Wrinkle* case, the patents seem to be a weak excuse for blatant market division and price fixing. But even though the patents are weak, that doesn't mean they aren't a barrier to entry. As the *Actavis* case showed, even weak patents provide a basis for a lawsuit. And patent litigation costs money, an observation which is bolstered by the fact that Hexetron Halogen has said it may need tens of millions of dollars to fight these guys in court over the patents.

Second element - anticompetitive conduct:

When Applied Atomics and Iridion used weak patents as an excuse for dividing markets in such a way as to deliver to each other a monopoly in SSC-laser projectors and lemdar analyzers, they willfully obtained a monopoly other than through "superior product, business acumen, or historic accident" (Grinnell). They didn't injure competitors, but they destroyed all competition in the two lines of business (but note, again, for Sherman Act §2 purposes, SSC-laser projectors aren't a separate product market from cinema projectors).

Another specific way that the defendants have engaged in anticompetitive conduct is through the charging of monopoly prices. When Iridion charges $1 million for a machine that costs $100 to make (average variable cost being a decent stand-in for marginal cost), that is monopolizing pure and simple. This is exactly the kind of anticompetitive conduct that Sherman Act §2 was designed to stop.

Yet another way Iridion has engaged in anticompetitive conduct is through tying. This is probably not per se illegal tying because lemdar analyzers are such a new area that a court would likely decline to apply per se analysis just like the court in *Microsoft* declined to do because the technology is so new. But applying rule of reason style analysis for tying indicates that this is exclusionary conduct. To start out, the lemdars should be considered a separate product from database access even though they are often purchased together. Like the Internet Explorer software in the *Microsoft* case, the fact that some form of database access is necessary does not mean that it is the same product or a part of the product. You need gas for a car but they're not the same product. Based on the market before Iridion began tying, consumers purchased database access separately. This means that as judged by consumer demand, lemdars and database access are two different products. There's bundling or coercion here because Iridion bundled free database access at no additional cost with the lemdars. So even if a buyer could technically decline the database access or not use it, it is economically infeasible to decline the tied product when one purchases the tying product. We can see that Iridion has the power to force the tied product on buyers and that Iridion's actions have had anticompetitive effect because previously labs chose other database access providers, but since Iridion began this bundling, labs have stopped subscribing to other databases.

Iridion, for its part, does not have promising procompetitive justifications. This is not a new product launch, so it's not a question of ensuring a successful product launch. They can't argue that the bundling is needed to protect their reputation by ensuring the smooth functioning of the product because based on the facts it seems competitors' databases worked fine and, besides, now that they are the only firm in the market for lemdars, there's no issue of protecting their reputation to enhance interbrand competition, because there is no competition.

The main thing that Iridion appears to be doing here is raising the barriers to entry in the market for lemdar analyzers by driving out of business a needed complimentary service, thus requiring two-level entry. (This was like some case we read where the service came bundled with the machines so as to prevent an independent service industry which meant that anyone selling competing machines had to also sell service.) There's nothing here that looks like network effects that would raise additional barriers to entry, but it's still a concern with regard to the two-level entry.

The best argument that Iridion has going for it in disputing anticompetitive conduct is a social welfare justification. That's because users' use of the database causes it to grow, and because this will advance scientific research, that probably excuses this conduct from Sherman Act §2 liability. At the end of the day, the Sherman Act is about helping society, and if industry innovates a new way of helping society — even if that means eliminating competition, the Sherman Act will support it rather than prohibit it.

QUESTION 6:

Using **no more than 600 words**, critique Bob Bealins' essay response. What was good about it? What did he get wrong? What useful analysis did he leave out? Don't worry about the writing style, punctuation, spelling, grammar, or so forth. Focus on the substance. The idea is for you to show off what you have learned about antitrust law by critiquing Bob's response. (Feel free to call the student "Bob" or "BB" as you like.)

(Reminder: The first two words of your response must be "_____ words" indicating the word count for this question.)

SET-UP FOR QUESTIONS 7 THROUGH 25 (SHORT-ANSWER QUESTIONS):

Answer these short-answer questions based on information to be found in the book, on posted slides, or in other course materials. (Thus, if you don't know the answer immediately, don't be afraid to look it up.)

For each short-answer question, **your response is limited to a maximum of 10 words**. For some of these questions, a one or two word response could be adequate. For other questions, you may wish go to the limit of 10 words. But do not go beyond 10 words—even if you think of additional interesting things to say! Answers that go beyond 10 words will not receive credit.

Note that for these short answer questions there is no need to provide a word count. I can count them up myself. (And I will.)

7. What number of significant firms does market research indicate is generally sufficient to defeat oligopolistic cooperation?

8. What market/industry characteristic, traditionally considered a barrier to entry for purposes of monopoly power analysis, is generally not considered a barrier to entry for monopoly analysis purposes according to Chicago School thinking?

9. Characterize the courts' current attitudes toward predatory pricing claims.

10. Why does the typical demand curve go down from left to right on a normal supply and demand graph when viewed from a marketwide perspective?

11. What is allocative efficiency?

12. What does allocative inefficiency have in common with deadweight loss?

13. Is vertical price fixing per se illegal or is it subject only to rule of reason scrutiny?

14. What's at least one reason (more if you like) that vertical price fixing could be procompetitive?

15. What's a reason a non-compete agreement might be considered to be in the public interest under state law?

16. What's a reason a non-compete agreement might be considered to be not in the public interest under state law?

17. How could your state legislature make legal a horizontal price-fixing conspiracy that would otherwise be per se illegal under Sherman Act §1?

18. How would you characterize the interstate commerce requirement of Sherman Act §1?

19. List at least two things (and more if you like) that Broadcast Music, Inc. had going for it as an antitrust defendant in *Broadcast Music, Inc. v. CBS, Inc.*, that Maricopa County Medical Society did not have going for it in *Arizona v. Maricopa County Medical Society*?

20. Consider what you know about the NCAA from reading the *NCAA v. OU* opinions. Assume that the University of Kansas (KU) and the University of Missouri (Mizzou) are both member institutions of the NCAA. Could KU and Mizzou make an agreement between themselves with regard to the NCAA that would constitute a "contract, combination in the form of trust or otherwise, or conspiracy" under Sherman Act §1? Why or why not?

21. What are one or two things you could do that would likely get federal prosecutors interested in prosecuting you criminally under Sherman Act §1?

22. Describe the demand curve from the perspective of a small firm in a perfectly competitive market.

23. Between vertical mergers and horizontal mergers, which are less likely to be challenged by DOJ or FTC and why?

24. If one firm with 50% of the market offers invites another firm with 50% of the market to enter into a price fixing conspiracy, but the second firm always follows the law and thus was never going to agree to form the cartel, is the first firm off the hook for attempted monopolization because there was never a dangerous probability of success?

25. What is your exam number? (Remember: Do not use your name!)