

Question 1

Basic Requirements

The first challenge Holder's '123 patent may see is a utility challenge. However, the '123 invention ("Holeroom") clearly satisfies all three utility requirements. First, the Holeroom apparently operates as Holder claims. Second, although some uses of a Holeroom may be injurious to society, the standards for beneficial utility are greatly relaxed; the Holeroom will be found to have beneficial utility as well. Finally, the Holeroom has practical utility because Holder has a use for it at the time of invention, and it works as expected – unlike the *Fisher* case, where the inventor failed to crawl over the exceedingly low threshold for utility.

The next challenge will state that the '123 patent is not enabled. The question is whether a person having ordinary skill in the art ("PHOSITA") would be able to practice the invention. Here, the '123 patent seems to be enabled. The scope of the claim is very broad, but the art is not very crowded. However, at the time of the application, both major components of the technology were available; a PHOSITA, in this case a computer scientist with a knack for hardware interfacing, should have no difficulty figuring the patent out and what it does. Unless a defendant could claim that the '123 patent, as claimed, required undue experimentation as in the *Amgen* case. There, the defendant would have to show that the eight factor test found in *In Re Wands* lead to the conclusion that experimentation was undue. However, there will likely be no experimentation claim here.

There also may several challenges to the '123 patent based on the written specification. The first challenge would be that the written description was insufficient to tell the PHOSITA what to do. This would likely fail because it is clear through the specification that Holder possesses the invention. However, there is some question as to whether the software is fully

described, or if it even needs to be. If the software does need to be described, there may be a deficiency in the specification which could invalidate the patent, because Holder simply describes the end result of the code and not how to create it. This could be similar to the *Eli Lilly* case, where an invention was enabled by not described. A best mode challenge may also be made, but should similarly fail. *Randomex* held that the best mode is satisfied if the inventor gives the best available way of practicing the invention; brand names, as long as not the product of the inventor, are acceptable. Here, Holder clearly identifies the BPC projector as the best solution. Holder is less clear about the force field projector; however, under *Chemcast*, it is still clear that the Holder has a best mode in mind, and that idea is enabled through the conditional “any force field generator will do...if...has a force treadmill...” A PHOSITA would be able to easily determine how to practice the invention.

The ‘123 patent is also sufficiently definite to pass. Under the old standard, which the PTO still uses, there is an antecedent basis for the claim. There are no words in the claims which are not defined or given meaning in the specification. Under the standard which a court would use, given in *Orthokinetics*, the question is if the claims are insolubly ambiguous. Aside from any lingering questions about the enablement of the necessary software, and accordingly, if the specification is definite enough about this element of the claim – questions which are resolved here by noting that a PHOSITA would be able to determine how to create the software– this claim is sufficiently definite to pass a validity analysis.

A defendant may also question whether or not the Holoroom is patentable subject matter under 35 USC § 101. From the *Chakrabarty* case, the general assumption is that everything under the sun made by man is patentable. The *Benson*, *Flook*, and *AT&T* cases all further this by holding that software element can be patentable as well. Although some disagree with those

holdings for policy reasons, their precedential value is unchallenged, and as such, a court would have no difficulty in finding the Holoroom a patentable machine with a software component.

Novelty

A defendant might bring up the original Star Trek ideas in an argument that the patent is invalid because it has been identically anticipated under § 102(a). The defendant would state that the television show's Holodeck, from 1987, contained all elements of the Holoroom and therefore anticipated and invalidated the Holoroom. There are several responses to this argument. First, the Star Trek idea was just that – an idea of fantasy in a television show. As such, a Holoroom was never actually known, used, or sold in this or any country before Holder's invention. Secondly, there was never a patent on the Star Trek idea, to our knowledge. Even if a defendant were to convince a judge that the show was reality television and the Holodeck was known, used, or patented, Holder could argue that the art was lost in the great Hollywood disaster of 2012, as the art was lost in the *Gayler* case, and could possibly defeat anticipation based on the show itself.

However, the Star Trek: How It Works manual from 1990 did describe a Holoroom like invention. This places the '123 invention at risk of being anticipated under § 102(a) as a printed publication describing the invention. Holder can rebut this argument by simply stating that at the time of publication, 1990, the invention was not enabled. Although the manual's description is similar to her patented claim today – at the time of publication, the public couldn't learn anything from the manual.

A defendant also may argue that the Force Field Dynamics "lifelike force generator" ("FFD device") with instruction manual inherently anticipated the Holoroom. Although the FFD

device does not contain the same elements in its (assumed) claim as the Holoroom, and as such would not anticipate identically, the manual does indicate that by operating the FFD device, one must create a solution to show immovable objects as to not injure users, thus resulting in a Holoroom-like invention. This argument is defeated here as in the *Seaborg* case. There, the original patentee did not appreciate that it was creating a new element – the patent was for a nuclear reactor. Also, the public did not get the benefit of the new element, because it was produced in such insignificant quantities. Here, Force Field Dynamics likely did not appreciate it was creating a science-fiction reality – a Holodeck. Correspondingly, the public did not get the benefit of a Holoroom until Holder created it.

A more serious challenge may be made under the statutory bar, § 102(b). An invention may not be patented if the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. Holder applied for her patent on January 2, 2020. Therefore the critical date is January 2, 2019. Identical prior art before this date may cause Holder's patent to be invalidated. Clearly the invention was not patented before this date – BPC's Japanese patent is not identical and therefore not prior art here. And as analyzed above with the Star Trek material, the invention was not described anywhere, although a defendant may raise the argument about "How It Works" again. There was no public use prior to this date; however, Holder did experiment with the prototype. A defendant may raise this experimentation as a statutory bar to the plaintiff's patent. Holder should respond by noting the *American Nicholson Pavement Company* case. Although Holder's experiments were likely conducted in secret, even if someone had observed the Holoroom being created, the experiment was at all times under the control and direction of Holder. A strong policy argument also exists

for allowing an inventor time to perfect her invention in private before filing; the statutory bar should not be applied for this experimentation.

Holder also made a general offer for sale one day before the critical date – another possible statutory bar. Under *Plaff*, a product is considered on sale and a statutory bar when a specific offer is made for a product ready for patenting. Holder completed the prototype before this date. Even if there were design aspects yet to be finalized, the defendant could likely argue that Holder had prepared drawings or other descriptions of the Holoroom that were sufficiently specific to enable a PHOSITA to practice the invention (i.e.: the Holoroom was ready for patenting). However, even if the defendant successfully made this argument, Holder has a good response in that the offer was not specific, as in the *Tech-Air* case. Holder did entice respondents to submit pricing and technical inquiries, but she could argue that she still did not yet have all the detailed technical information about the Holoroom to return any inquiries. Furthermore, she did not set a date at which the Holoroom may be delivered. Holder could argue that her advertisement on January 1, 2019, was nothing more than a vaporware announcement; she released the information without any idea she could actually sell the invention and was simply piquing interest. Furthermore, she didn't release enough information to run into a printed publication bar. Nothing in the announcement was specific enough to constitute a printed publication capable of enabling a PHOSITA to practice the invention, let alone give the public any benefit. Because the advertisement was so vague and general, a court would not likely find that the Holoroom was on sale one year prior to the application; therefore, the Holoroom should be patentable over any statutory bar arguments. Furthermore, Holder did not abandon the Holoroom under § 102(c).

Obviousness

Because there is little prior art that matches exactly, a defendant place more emphasis on an obviousness attack on the Holoroom. The controlling cases here are *Graham* and *KSR*. Under *Graham*, we must first determine the scope and content of the prior art. The prior art here is the FFD device (used in this country) and the Big Projector Company's "holographic projector." We must assume each art contains only one element of Holder's claim. Next, we must ascertain the differences between the prior art and the claims at issue. Holder's claim contains three elements: a holographic projector, a force field generator, and a software program linking the two. The difference is, for each prior art, the absence of the other prior art and the software element. Next, we must find the level of ordinary skill in the art. As mentioned previously, the PHOSITA in this case is a computer scientist, capable of manipulating software and holograms, having sci-fi memorabilia posted on all her walls. Next, we must argue that the Holoroom isn't an obvious combination of the prior art. This question is a legal question determined by the judge. Because of this, although we should make arguments here that the Holoroom clearly isn't obvious, we should concentrate on the secondary factors found in *KSR*. Of these, we should note that no one has been successful in creating this invention before, even though it has long been dreamed of in science fiction (although steering clear the defendant's anticipation argument). Further, the only material provided with the force field generator seemed to teach away from a holographic dynamic image; the language literally seems to indicate a fixed marker should be placed somewhere to protect users from running into inanimate objects. Although there was one other competitor that concurrently developed a Holoroom-like product, this is far short of the number of simultaneous inventions that would lead to a finding

that the combination of prior art was obvious. Therefore, on the whole, Holder has a good argument that the Holoroom is not obvious.

Interference

WSI would not have been able to establish invalidity of the '123 patent in an interference under § 102(g) because of a break in due diligence. Although WSI started development of a Holoroom-like product (their Urban Warfare Simulation product) before Holder, there was a period of inactivity for almost a year, during which time Holder began her experimentation and reduced her idea to practice. WSI was taking no reasonable steps to market; rather, WSI simply could not make the idea work with existing technology, and had to hold development until the United States release of the holographic projector. Therefore, WSI's claim that the '123 patent should be invalid under § 102(g) should fail.

Question 2

Infringement

WSI can expect to see claims of both direct and indirect infringement. The first step in this process will be a *Markman* hearing, where the claims at issue are construed. Because the specification and claim in the '123 patent are fairly straightforward in their language, the judge will likely have no difficulty determining what is encompassed by the claims. The prosecution history here does not appear to provide much context other than emphasizing the importance of the software for connecting the two other elements together. Essentially, the court will likely consider the '123 claim to include three elements: a holographic projector, a force field generator, and a software package tying the two together.

The WSI simulation products will likely not be found to literally infringe the '123 patent. This is because although the WSI patent contains the holographic projection and force field generation elements, the “design console” does not match up literally to the “software sufficient to coordinate” element of the '123 claim. The court will use a doctrine of equivalents analysis here. If the inventions are equivalent, WSI will be found guilty of infringement. The *Winans* case teaches one easily applicable embodiment of the doctrine of equivalents test: the same function, same way, same result test. Here, in the Urban Simulation system, the question is whether WSI's design console does the same thing, the same way, with the same result as the software package in the '123 patent. WSI may respond that the function is entirely different; rather than simply coordinate the projector and the generator, the design console allows for creative manipulation of the link between the two. While this is a solid argument, WSI should prepare for a court finding that the two do perform the same function, the same way, with the same result. Therefore, WSI may be found liable for direct infringement of the '123 patent

because it produces the components for the infringing product and has an employee put them together to complete the infringement. WSI may have a better argument for their Jungle Warfare Simulation System. This time, the design console and the projector are slightly different than the literal equivalent in the '123 patent. Again, WSI should argue that the projector is mounted in such a way to achieve a different result differently; a projector mounted anywhere which shows a hologram that isn't limited to a room. Again, while this is a solid argument, if the court disagrees, WSI will be found to directly infringe for the same reason as above.

WSI may also be found liable for indirect infringement under § 271. Assuming that the simulation systems directly infringe as contemplated above, and assuming that WSI was informed at some point that it was infringing the '123 patent, each customer use of a kit would result in indirect infringement for WSI. However, WSI has specifically denied any knowledge of the '123 patent or the Holoroom. Therefore, it is likely that WSI would not be found guilty of any additional indirect infringement. There is no scienter at all, eliminating both contributory and inducement liability. Furthermore, there is no liability for infringement overseas, as NTP skillfully demonstrated with their solution to the Blackberry patent issue. There may be liability for the actual shipping of components under 271(f), as in the Microsoft case. However, if WSI could argue that the components were staple articles that had substantial non-infringing uses, liability may not be found here.

Defenses

WSI has several unenforceability defenses available if the court finds that it has infringed the '123 patent. The first of these is the Reverse Doctrine of Equivalents defense. First elaborated in the *Westinghouse* case, this doctrine holds that even if the infringer falls within the claimed scope, what is claimed is being operated so differently a finding of non-infringement must issue. This doctrine is exceedingly rare, and should not be answered by WSI. There is little evidence to show that the inventions are operated so differently as to successfully assert this defense. There are also no experimental use or laches defenses available either. Even though experimental use has been severely limited under the *Duke* and *Bolar* cases, WSI's use is clearly commercial. Holder has not delayed unreasonably in filing the claims for the '123 patent. Furthermore, Holder has not delayed in bringing suit against WSI. Therefore, there are no laches defenses viable in this case.

WSI must assert a defense of inequitable conduct in its initial answer to the suit; as an affirmative defense, this defense must be pleaded initially or lost forever. However, unless WSI can uncover facts indicating that Holder intended to withhold material information in the prosecution of the patent, this defense will fail. Such evidence may be the existence of the Japanese patent on the holographic projector. This is a factual inquiry. Note that WSI can find more evidence of intent than materiality and be successful; *JP Stevens* held that the inequitable conduct analysis was a balancing test of the two factors.

WSI may also conduct discovery to determine if there is any evidence of Holder misusing her patent or engaging in illegal tying arrangements. Evidence of misuse may include attempts to extend the patent monopoly period or abuse market power. Tying arrangements, after the

Patent Misuse Reform Act of 1988, are less likely to render a patent unenforceable, as shown in *Recombinant DNA Technology*. Because Holder is actively producing her product, she is not a patent troll, and her lawsuit does not appear to be an antitrust violation.

Remedies

If WSI faces liability for infringement, Holder will initially argue for both a preliminary and permanent injunction. The preliminary injunction test encompasses the four traditional factors: reasonable likelihood of success, irreparable harm, balance of the hardships, and impact on public interest. After the *eBay* case, the test for a permanent injunction is now the same as the preliminary test, except for likelihood of success being replaced by the question of either the remedies available at law are inadequate. WSI will not likely face either injunction because of the public interest in maintaining a well-trained police and military force. The other factors, in either test, on balance, would not outweigh this interest.

Holder will likely ask the court for lost profits, as well. From the *Panduit* case, Holder will have to show demand for the product, absence of a substitute, capability to sell, and amount of the infringer's profit. Here, WSI faces a tough argument that Holder was able to sell her product to a demanding consumer base, there was only one other substitute – the infringing product, and WSI made a huge profit - \$20 million dollars on 2000 sales. Depending on whether or not components shipped abroad under 271(f) were infringing, there may be a \$5 million discount on this profit. However, it seems likely that a court would find WSI took at least \$15 million in sales from Holder and may award her those profits.

The best case for WSI, if infringement is found at all, would be to have a reasonable royalty penalty. As in the *Rite Hite* case, to determine a reasonable royalty, a court will consider

what royalty would eliminate any reward for infringing, the amount of non-infringing substitutes, and whether the WSI received a profit. Because Holder has apparently not licensed her technology to anyone else, there is a good chance a court applied royalty would be substantial. However, this would likely be less than the lost profit remedy.

Question 3

The U.S. is a signatory to the Patent Cooperation Treaty (“PCT”). Therefore, if a foreign patent holder activates a patent in the United States under the PCT, and the patent is written in English, the patent is valid in the United States with an effective date of the actuation. In this case, BPC has activated its patent for the holographic projector in the United States as of June 30, 2019. Holder’s patent has a priority date of January 2, 2020. If Holder’s patent is found to be valid under a traditional analysis as outline in the first memo, BPC cannot infringe because of the “that which infringes, if later, anticipates, if earlier” maxim of patent law. For Holder’s patent to be valid, BPC’s patent would have to be found to not anticipate, and therefore, could not infringe later. If Holder pushed this argument, it may impact the validity of her own patent. Although some improvement patents block the original patent from being practiced, this does not seem to be the case here. This is not an improvement; it is a substantially new device. Hence, summary judgment dismissing the case would be appropriate.

The defendant may also argue that Holder is a licensee of BPC. Although there is no evidence of a specific license, as Holder purchased the BPC projector from the Japanese grey market, there may be an implied license under the traditional first sale doctrine. Under this doctrine, BPC would have licensed the right to use the projector to Holder when the sale occurred in Japan. Previously, if in the Federal Circuit, Holder must have breached this license before bringing suit. If Holder did not breach, this suit must be dismissed. However, under the *MedImmune v. Genentech* case, which now controls, Holder can bring this suit at any time for a declaratory judgment under 22 U.S.C. § 2201. The question of a license controls. If there is no license, a declaratory action would be improper.

If the court must resort to equity, the fairness standard should be applied to Holder's dealings with BPC. It would be unfair to allow Holder to take advantage of BPC's product and turn it into something BPC did not contemplate, and then attempt to restrict BPC's use of the original product.