Question 1 – Patentable Subject Matter

According to 35 U.S.C. §101, patent protection may be given to a new and useful "process, machine, manufacture, or any . . . improvement thereof." Courts have found natural phenomena, laws of nature, and abstract ideas to be unpatentable (Chakrabarty; Bilski). Pat's claim is for software "re-envisioned," and HP should argue it is an intermediate step that is merely an abstract idea. The court would apply the *Alice* 2-step test: (1) determining that the claim is directed at an abstract idea (a judicial exception), and (2) asking if Pat's application of that abstract idea is unconventional or inventive (Alice; Prometheus). The court must assess each of the '123 patent's two claims separately.

Pat will argue that the device and method are applied unconventionally, adding an "inventive element" to the claims. Eventually, everything comes down to framing. HP should argue more against Claim 1, the 'electronic accessory device' (EAD) because that language is broader than Claim 2 for the 'method of enhancing the portable computing device' (PCD), and say that the device in Claim 1 is comprised only of things that already existed. Pat will counter that the combination is unconventional and that there was no meaningful relationship between these devices before Pat created the combination, as well as arguing there is a difference between broad vs. abstract claim language. It is likely Pat will prevail because Claim 1 is like a machine and Claim 2 is transforming the component machines that comprise Claim 1 (under *Bilski*, this means it will be less likely to be an abstract idea in the first place).

Question 2 – Challenges to validity

Utility - §112

There are three types of utility: (1) operable, (2) beneficial, and (3) practical that have to be shown at the time of invention. The invention must work for operable utility. To test operable utility, the court will ask: is it inherently unbelievable? (In Re Brana). The claims' believability is measured in the eyes of the PHOSITA by assessing the entire specification (not just the claim). There shouldn't be a challenge to operable utility because Claims 1 and 2 of the '123 patent are not inherently unbelievable, and a PHOSITA would believe the device and method would work (and it doesn't have to be proven to have full effectiveness).

To have beneficial utility, the claims cannot be "immoral or mischievous" (Lowell v. Lewis) or frivolous or injurious to others/society. (Juicy Whip). Claims 1 and 2 are likely to have beneficial utility because they provide a useful device and method of making that device and there should be no challenge here.

Practical utility requires specific and substantial utility. (In Re Fisher). This means that a patent application must show that the claimed invention provides a significant, presently available, well-defined, and particular benefit to the public. The '123 patent may get a challenge to practical utility because you have not yet made the device, but it will likely meet the *Fisher* court's standard of "real world utility" because the immediate benefit can be seen on the horizon, Claims 1 and 2 are not so vague as to be meaningless, and there is a particular benefit to the public.

Enablement - §112

In order to overcome a challenge to enablement, Pat must prove that the specification discloses the manner of making and using the invention "such that [the PHOSITA] could make and use the full scope of the [claimed] invention without undue experimentation." (Warner-Lambert). The *Wands* factors for determining undue experimentation are: quantity of experimentation necessary, amount of direction presented, presence of working examples, nature of the invention, state of the prior art, relative skill of those in the art, predictability or unpredictability of the art, and breadth of the claims.

This is a software invention where the PHOSITA is likely highly skilled. There are drawings and any similar tablet device would probably be a working example of prior art. Software may have different forms of code but the interoperability of such is highly predictable, and there is likely little sophisticated software or electronics work necessary as the "accessory device" is simply a port for the PCD and "can have limited or no data resources, that is, no CPU" and charging docks for phones, tablets, and the like are already part of the prior art. HP will challenge the somewhat vague directions (i.e. "the [EAD] contains a communication channel, which is a connection mechanism arranged to facilitate communication between the [EAD] and the [PCD]" and "implementation of such an accessory device, including different specifications, is well within the skills of [the PHOSITA]") and the amount of required experimentation (unknown). However, charging docks are already known and used and this is just building on that technology that should be within the wheelhouse of the PHOSITA. Thus, the '123 patent should not require undue experimentation.

The specification must also enable how to make or obtain the starting materials to avoid inventors getting the patent monopoly and the benefit of trade secret on the materials. (Wands). Although the specification doesn't explicitly state starting materials, you can argue that the specification makes clear what the component parts of the device are or could be and their equivalents (a phone and a tablet) and any PHOSITA would be able to fill in the gaps.

Enablement and claim scope are intertwined such that the enablement must support the claim scope as the scope of enablement is the scope of what is described in the specification plus the scope of what the PHOSITA would know without undue experimentation. (Invitrogen Corp.). The challenge to this scope is whether the scope of the claims is broader than the scope of enablement. Here, that doesn't seem to be the case as undue experimentation shouldn't be required.

Written Description - §112

According to *Ariad*, a challenge to the written description can be met if the disclosure of the application relied upon reasonably conveys to PHOSITAs that the inventor had possession of the claimed subject matter as of the filing date. This must be in the specification, does not require reduction to practice (RTP) or examples, and varies by context. This is an objective view of what was subjectively in the inventor's (Pat's) head at the time of filing. (Gentry Gallery). As previously said in enablement, although some statements may be challenged for being vague or broad, there are definite statements about the parts ("includes a visual display and a keyboard . . . provided by the accessory device" and "the accessory device can have a form factor corresponding to a laptop computer") and a tablet is an alternative to the phone and the

accessory can have a “touchscreen” that is “like a trackpad of a laptop device.” All of these examples show that Pat had the invention in her possession at the time of filing, even if they are broad and provide discrete alternatives.

Definiteness - §112

Orthokinetics gives the standard for definiteness that one must view the patent as the PHOSITA in the applicable field, distinguish the claims from the specification (definiteness is a matter of claim drafting and the claim is read in light of the specification), give other inventors notice of what you have claimed (competitors’ uncertainty is a concern) and test claim drafting by standards in the relevant field.

Although Claim 1 is broad, Pat can overcome any definiteness claim because it covers the ‘metes and bounds’ of the device as a combination of an EAD and a PCD. The bigger issue is that Pat claims it is a “means” for “receiving input from or providing input (display) to the user,” triggering a presumption that the claim is an indefinite “means plus function” claim. But the specification clearly gives the structure, so Pat has claimed the EAD and two types of PCD and their equivalents. Claim 2 is also sufficiently definite when read by the PHOSITA in light of the specification, especially because it delineates that it is a “method” and that the “[EAD] is inoperable” without the communication channel between it and the PCD, giving competitors notice of what is being claimed, and a PHOSITA would find that it meets the reasonable certainty standard (Nautilus) and is not “insolubly ambiguous” (Orthokinetics).

Novelty - §102

§102(a)

For challenges to §102(a) anticipation, Pat must establish her date of invention, which is defined as RTP. Here, the filing date (10/01/12) is the date of invention unless Pat can corroborate his RTP on an earlier date, such as his starting date 06/01/11. Because it was arguably not RTP before the filing date, 10/01/12 is the critical date. Everything that comes before this is prior art. The standard is whether the prior art was "known or used by others in the US" or "patented or described in a printed publication anywhere in the world" before Pat's date of invention. However, each prior art must also disclose and enable all the elements of Pat's claimed invention.

The Wii U was released one month after this date (11/01/12) but engineers worked diligently on it since June 2010, including testing it with user groups. In September 2011, Nintendo released photos of the system and tech websites speculated about it. Even if the June 2010 date doesn't count as prior art (even though it was available to user groups and presumably not kept secret, it depends on the standard in the industry), the September 2011 date is prior art to the 10/01/12 critical date. (See Rosaire; public = not secret). However, it is not effective prior art and doesn't anticipate Pat's invention because it is missing an element of Pat's Claim 1: the "housing" element for the hand-held device on the accessory device "having a recess" to fit the hand-held device, and of Claim 2: "receiving the PCD at an EAD." Also for Claim 2, the main Wii unit is not "inoperable until the communication channel is formed."

Next, the Microsoft surface tablet was released to the public on 07/01/12, prior to the 10/01/12 critical date. Although it was created in "complete secrecy," once it was

launched it was public with “reviews and pictures everywhere” and a “full tech support website,” so it was known or used by others and described in a printed publication. However, once again Pat can argue it doesn’t meet the all-elements rule because it has “exposed connectors” on the PCD instead of Pat’s “communications channel” and “housing having a recess” under claim 1, although this will likely be challenged in court because the connectors could be said to have multiple “recesses.” Under the Doctrine of Equivalents (DOE), Microsoft can make a good argument that the claims are equivalent. For 102(a), all elements have to be present expressly or through DOE. (Robertson). Pat will have to argue that Microsoft also does not anticipate Claim 2 because no “communication channel” is created but rather the connectors at the bottom simply combine the two or that the EAD doesn’t “receive” the PCD because there is no recess into which the PCD can fit. Again, he will likely have to fend off a DOE argument (although SCOTUS said not to use this too liberally; *see Warner-Jenkinson*; requires comparison on element-by-element basis and no missing elements).

Similarly, the HP Lap Dock filed for a patent in 09/30/12 (one day before 10/01/12) but the patent application doesn’t meet the all elements rule because the claim doesn’t mention inoperability without a PCD connection or a recess in the housing and that is a requirement for 102(a). Pat will have to argue that the release date in early 2016 is the date it actually became public (no patent was issued before Pat’s invention date so it is not prior art under §102(a)).

§102(c)

Pat did not expressly abandon his invention to the public or practice the invention as a trade secret before filing so this will not be challenged.

§102(e)

Under 102(e), Pat would face a challenge if there were prior art inventions described in a patent or printed publication in the US or a PCT country in English. You backdate the invention to the date of filing in these cases. Under 102(e), patents are effective on the day they are filed so if the HP Lap Dock patent issues, then it will be backdated to 09/30/12 and will be prior art. Under 102(e), even if the claim doesn't anticipate under 102(a) it could still be prior art because 102(e) allows it to be only in the description as well. Pat will have to argue that even the HP description and claim together don't meet all his claims because the wire connecting phone is not a "control signal" from the PCD to the EAD but rather that it is missing an element for Claim 1 and that the wire doesn't "form a communication channel" under Claim 2.

§102(f) - Derivation

Under 102(f), if you get the idea from someone or somewhere else, then you are not the inventor. There should be no 102(f) challenge here because no one told Pat about the invention before she thought of it.

102(g) – Priority

102(g)(1) (interference) is not at issue because HP didn't claim all the elements that Pat claimed and neither of the other products has a patent. However, 102(g)(2) could be at issue with HP's Lap Dock (LD). There was a delay of three and a half to almost 4 years between HP's RTP (its filing date 09/30/12) and when it released the LD

to the public (early 2016). Under 102(g)(2), the invention must not have been abandoned, suppressed, or concealed (ASC) and must have been reduced to practice. ASC applies post-RTP and pre-filing. That means that here it would only apply in 2012. However, sitting on the patent application and not taking steps to make it public could arguably be inferred abandonment even after filing if there are no reasonable steps to bring the product to market (Dow Chemical). Under *Peeler v. Miller*, taking four years to file for a patent is *prima facie* unreasonably long and there is abandonment, and Pat can argue this logic should apply here to taking four years to bring a product to market or do something more with a patent that has been filed. Because usually the first to RTP wins a 102(g) race, Pat should argue that HP had inferred abandonment when it didn't take reasonable steps to bring its product to market and argue that he conceived both claims first (sometime before his 10/01/12 date between 06/01/11 and his filing date) and then diligently worked on the invention until the filing date. This conception date would have to be corroborated by someone else to meet the clear and convincing evidence standard. Diligence is relevant before RTP of the first to conceive because the first to reduce wins UNLESS someone else conceived earlier. Diligence means steady, industrious effort, and Pat has to explain even small delays.

If there is a 102(g)(2) issue with Microsoft's Surface tablet and both claims, Pat should argue that Microsoft abandoned their invention after RTP because they haven't filed for a patent (that we know of). He will have to argue that it was more than "mere delay" because it is not five years post-RTP without filing and again that she conceived of the idea first and then worked diligently on it (because their RTP is arguably before hers).

Statutory Bar - §102(b)

The critical date under 102(b) is one year before filing. For Pat, the critical date is 10/01/11. The invention will be barred if it is described in a printed publication, in public use, or on sale in the U.S. before the critical date (more than a year before Pat's filing date). Pat had a grace period during this time during which his own activity between 10/01/11 and 10/01/12 did not bar his right to receive a patent. However, Pat did start "playing around" with the idea on 06/01/11, outside of this grace period, but there is nothing in the facts that says he made the invention publicly known.

If HP tries to argue that the Wii U is a statutory bar under 102(b) for the June 2010 testing for both claims, Pat should say that this was just experimental use (an exception for third parties also). (City of Elizabeth; Baxter International). And the September 2011 release of photos and speculation by tech websites doesn't count as a printed publication because they weren't "available to the public," although this will be a hard argument to make. "Public accessibility" is the touchstone for determining whether something constitutes a printed publication for 102(b). (In re Klopfenstein). Market research is typically not an experimental use, but if the pictures were released in September but the articles were not online until October 2011, then they would fall within Pat's one-year grace period. Neither of the other two products would trigger 102(b) because Microsoft's release of the Surface tablet on 07/01/12 was within Pat's one-year grace period, as was HP's filing for a patent on 09/30/12.

Obviousness - §103

The critical date is the date of invention (here, the filing date 10/01/12). Courts apply the *Graham v. John Deere* test: (1) determine the scope and function of the prior

art; (2) ascertain the differences between the prior art and the claims at issue; (3) determine the level of ordinary skill in the pertinent art; (4) determine the obviousness or non-obviousness of the subject matter; and (5?) secondary considerations from *In re Sullivan* such as commercial successes, long-felt but unsolved needs, failure of others, etc.

The prior art here would include the 102 considerations above, except that it must be in the same field of endeavor, which would eliminate the Wii U (a game device). (Clay). It also doesn't solve the same problem as Pat's invention. (Clay; Winslow). The PHOSITA is presumed to know about all the prior art. (Calmar). The differences between the invention and the prior art (Surface tablet and HP's LD, which were both disclosed before Pat's invention date) are minimal. The all elements rule doesn't apply to 103 but rather all 102 references anticipate. The level of ordinary skill in the art is high even though Pat is just a "computer nerd" and "amateur tinkerer" because it has to do with combining functions for software devices. Determining the obviousness or non-obviousness is arguably the most important and most nebulous step. This invention was not a predictable variation or obvious to try or combine, so it will likely not be found to be obvious, especially because it has a non-obvious way of combining the two parts in Claim 2 and the combination result is arguably non-obvious in Claim 1. This is likely a long-felt but unsolved need and would not be obvious to a PHOSITA, even though things like charging docks would be included in the prior art the PHOSITA would consider, because the functionality here is totally different and it requires more ingenuity than the average software developer. (Hotchkiss).

Question 3 – HP's Literal Infringement/DOE Claims

Pat will argue that HP's LD literally infringes the '123 patent under 35 U.S.C. §271(a). Claims are interpreted as a matter of law. (Markman). Then after claim construction, a jury applies the claim language to the accused device as a question of fact. *Phillips* tell us to start with the claims, then look at the claims in the context of the entire patent, then at intrinsic evidence (prosecution history/disclaimers), then at extrinsic evidence (dictionaries, experts, etc.). The all-elements rule applies the same way it did to 102 ("that which would anticipate before infringes after"). Pat will also use DOE because it ensures that infringers can't escape liability for minor changes. As every claim is a separate invention, we will examine each claim separately.

Claim 1 – Literal Infringement

An electronic accessory device, comprising: [*LD = display for Windows Mobile Phone showing Windows operating system*]

a. Means for receiving input from or providing output (display) to the user; [*present for LD except there is a separate CPU and the connection is through a wire*]

This is a "means plus function" claim, so under §112, the entire claim containing such an element in the means plus function is interpreted to cover the structures disclosed in the specification and its equivalents. From Pat's specification, the means for receiving this input from or providing input to the user is through combining the PCD such as a phone or tablet with the EAD that has a communication channel, that allows the user to use the PCD's data processing through the EAD. HP should argue this is not literally infringed because the means for the two claims are different (a wire and a separate CPU mean the tablet doesn't rely on the phone alone for power).

b. a housing carrying the portable computing device, the housing having a recess; and [*arguably different – the LD is connected to a Window's phone by a wire but there is a non-functional*

pocket in the back to hold the phone (just not while the dock is working)]

c. a communications channel configured to receive a control signal from the portable computing device, [*the wire connects the phone to the keyboard/trackpad that then runs the Windows operating system through the phone*]

i. wherein the electronic accessory device is inoperable without the portable computing device being coupled to the communications channel [*same for LD except it has an extra element that includes a graphics processor to speed up graphics display and save phone life*].

Claim 1 Equivalents

Pat will argue that the means for her means plus function claim are equivalent to HP's means because the phone powers the dock and the wire is a means for receiving/sending input/output, but HP should argue they do not function the same way (the phone doesn't do everything and the wire is a different way of making a connection). Pat will also argue the inoperability without the phone connected and the recess in the housing are present in the LD as equivalents. Even though HP's claims are not identical and are missing those two elements, if the court does an element-by-element inquiry as *Warner-Jenkinson* says it must, Pat will argue that HP's LD elements are equivalents because they serve the same function, way and result as the claimed elements. She will likely succeed on inoperability but HP has a good argument that the "housing" does not actually "carry the device" in Claim 1 in the same way it does in Pat's patent claim because the device can't be used while the pocket is being utilized, and they do not function in the same way.

Claim 2 Literal Infringement

2. A method of enhancing a portable computing device, the method comprising:

[*arguably same for HP*]

a. receiving the portable computing device at an electronic accessory device; [*either*

wire or non-functional pocket]

b. forming a communication channel between the portable computing device and the electronic accessory device; and [*wire connection*]

c. controlling an operation of the electronic accessory device by the portable computing device using the communication channel, [*wire connection but separate CPU*]

i. wherein the electronic accessory device is inoperable until the communication channel is formed. [*same as above*]

HP should argue similarly to Claim 1 that it is not literal infringement because "receiving" is different in that the device won't function when the pocket is used.

Claim 2 Equivalents

Similar to the above – HP should argue the functionality is different under *Warner-Jenkinson*'s DOE function-way-result test and that it doesn't form a communication channel or receive the device in the same way as Pat's claims. Pat will argue they do the same thing, but HP can say they do not because "receiving" the device as a way of making the communication channel for Pat's claim is of a different kind than HP's simply storing the mobile device *or* connecting the phone to the dock by wire to operate it.

Question 4 – Contributory or Induced Infringement

Pat may bring 271(b) (inducement) claims against HP, and she must prove HP's "knowledge that the induced acts constitute patent infringement" and knowledge of the existence of the patent (Global Tech). Inducement is very hard to prove because there must have been more than reckless or deliberate indifference. Pat will have to argue that HP induced its customers into infringing Pat's patent either by actual knowledge of

the patent or by willful blindness, meaning “subjective belief there is a high probability” it exists and “deliberate actions” to avoid learning about it (Global Tech). Inducement requires encouragement with intent and will be unlikely to be successful especially because HP filed first.

If Pat brings 271(c) contributory infringement claims, she must prove that HP’s LD is not “a staple article of commerce suitable for substantial non-infringing uses.” Under *Grokster*, even 10% non-infringing use could be substantial according to Breyer’s concurrence. For contributory, someone (HP’s customers) must have directly infringed based on the HP’s sale and, under *Aro II*, HP must have known of the patent and the infringing activity. Because the products are so similar and there is little non-infringing that HP’s PD does (other than hold the phone without functioning), Pat will have a better chance of proving contributory infringement.