No. 17-1441

IN THE

United States Court of Appeals
FOR THE FEDERAL CIRCUIT

PERSONALIZED MEDIA COMMUNICATIONS, L.L.C.,

Appellant,

v.

AMAZON.COM, INC., AMAZON WEB SERVICES, LLC,

Appellees.

APPEAL FROM THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT TRIAL AND APPEAL BOARD, INTER PARTES REVIEW IPR2014-01528

**BRIEF OF APPELLEES
AMAZON.COM, INC. AND AMAZON WEB SERVICES, LLC**

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SEPTEMBER 22, 2017

CERTIFICATE OF INTEREST

Counsel for Appellees certifies the following:

    1.   The full name of every party or amicus represented by me is:

Amazon.com, Inc.; Amazon Web Services, LLC

    2.   The name of the real party in interest represented by me is:

Amazon.com, Inc.; Amazon Web Services, LLC

    3.   All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curie represented by me are:

None.

    4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency and who have not or will not enter an appearance in this case are:

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OTHER AUTHORITIES

STATEMENT OF RELATED CASES

This Court held all of the challenged claims (Nos. 1-3, 5, 9-14, 18-23, 27-32, 36-41, 45-46 and 50-52) ("Original Claims") of the only patent at issue, U.S. Patent No. 7,783,252 ("the '252 Patent"), invalid under 35 U.S.C. § 101. *Personalized Media Commc'ns, L.L.C. v. Amazon.com Inc*. ("*PMC*"), No. 2015-2008, 671 F. App'x 777 (Fed. Cir. Dec. 7, 2016) (Hughes, Schall, Stoll), *reh'g denied* (Feb. 9, 2017). In that decision, this Court affirmed the district court's judgment that the Original Claims (and the asserted claims of six related patents) were not patent-eligible. *See* 161 F. Supp. 3d 325 (D. Del. 2015). That decision supports Amazon's argument in this appeal that all of the proposed amended claims (Nos. 53-85) ('Substitute Claims") in PMC's Contingent Motion to Amend are also invalid under § 101.

PMC's Statement of Related cases identifies six companion appeals, five of which PMC has dismissed with prejudice. Only Appeal No. 16-2606, which is a companion appeal also arising from a PTAB denial of a contingent motion to amend in an IPR, remains pending.

Other than the cases listed above and those identified in PMC's Statement of Related Cases, Amazon knows of no pending case that will directly affect or be directly affected by the Court's decision in this appeal.

COUNTERSTATEMENT OF THE ISSUES

Did the PTAB abuse its discretion in denying PMC's Contingent Motion to Amend, holding that the Substitute Claims are impermissibly broader than the Original Claims in violation of 37 C.F.R. § 42.121?

Alternatively, are the Substitute Claims unpatentable under 35 U.S.C. § 101 and § 103?

INTRODUCTION

The Board correctly held that the Substitute Claims would remove a limitation from the Original Claims. PMC relies on an incorrect claim construction to argue that the Original Claims do not require the removed limitation. However, PMC's construction contradicts the explicit language of both the Original Claims and the Substitute Claims.

The Original Claims recite a method for replacing operating system instructions on a "programmable device of a specific version." The parties dispute whether "specific version" refers to a version of operating system software (as the Board held) or to hardware (as PMC argues). The Board's conclusion was compelled by the "wherein" clause that recites "said specific version indicates a version of an operating system." The Board thoroughly explained its reasoning in both its Final Written Decision and its Decision Denying PMC's Request for Rehearing. PMC glosses over both of those decisions and ignores their detailed rea-

soning. Because the Board's claim construction was correct, and the Substitute Claims are broader than the Original Claims, this Court should affirm the Board.

PMC's incorrect claim construction, even if accepted, would not overcome the Board's holding that the Substitute Claims are broader than the Original Claims. Those amendments removed limitations from the Original Claims because they changed the information that the claimed method compares when deciding whether to perform an update. Thus, regardless of PMC's claim construction, the Substitute Claims are broader than the Original Claims.

PMC argues that, by inserting the word "apparatus" in "specific apparatus version," its amendments simply make the proper construction of "specific version" explicit. Thus, PMC suggests that the Substitute Claims have the same scope as the Original Claims. But if that suggestion were true, then the Substitute Claims, like the Original Claims, would fail to satisfy § 101. This Court has already held the Original Claims are invalid under § 101. *PMC*, 671 F. App'x 777. Furthermore, even if PMC could show that the Substitute Claims are narrower than the Original Claims, any difference in scope would be insufficient to satisfy § 101. Thus, the Substitute Claims are unpatentable even under PMC's claim construction.

The Substitute Claims are also unpatentable for obviousness under § 103. Indeed, the same reference that the Board relied on to invalidate the Original

Claims also discloses the language PMC added to the Substitute Claims. Thus, § 103 provides another alternate basis for affirmance.

Finally, this Court should reject PMC's constitutional attack on the IPR process which is based on the *Oil States* case pending before the Supreme Court. *See Oil States Energy Servs., LLC v. Greene's Energy Gp., LLC*, 137 S. Ct. 2239 (June 12, 2017) (granting certiorari). PMC contends that, if the Supreme Court were to hold IPR proceedings unconstitutional, this Court should reverse the Board "by entering the substitute claims." (Br. at 5.) This appeal does not depend on *Oil States*. If IPRs are held to be unconstitutional, the Board could not have cancelled PMC's Original Claims and PMC's Contingent Motion to Amend would be a nullity. Accordingly, this Court should not enter PMC's Substitute Claims regardless of the outcome of *Oil States*.

COUNTERSTATEMENT OF THE CASE

A.   The '252 Patent

The '252 patent claims are directed to a method of replacing operating system ("OS") instructions on a programmable device. The patent claims priority to an application that was originally filed in 1981. (Appx818.) That application described a system in which conventional television and radio receivers were combined with conventional processors so the receivers could process data embedded in a television or radio signal. (Appx1867.) The 1981 application never disclosed

the '252 patent's claimed method for replacing operating system instructions—as Amazon explained in the IPR (Appx108-110) and PMC did not dispute.

In 1987, PMC filed a continuation-in-part application that discussed "operating systems" for the first time (but still in the context of adding computers to television and radio networks). Over the next eight years, PMC filed multiple continuations, culminating with 328 applications sharing the same specification that were filed in 1995, immediately before the GATT patent term changes took effect. One of those 328 applications led to the '252 patent at issue here. PMC continued to prosecute that application for another 15 years, until the '252 patent issued in 2010. (Appx818.)

During the prosecution of the '252 patent, the applicant relied on a section of the specification entitled "Preprogramming Receiver Station Operating Systems" as written-description support. (Appx1801-1807.) That section explains that operating systems include, for example, "PC-DOS and MS-DOS," which have "capacity for controlling the operation of an IBM PC." (Appx1002 at 265:51-57). Such operating systems may have "versions," such as "1.00, 1.10, 2.00, etc." and "later versions generally have expanded capacities in comparison to earlier versions." (*Id.*) Thus, operating system instructions stored in memory may be "overwritten" for the sake of "expanding system functions." (*Id.* at 265:45-57.)

B. Procedural History

In 2013, PMC sued Amazon for infringement of the '252 patent (and eight other patents with the same specification), arguing that Amazon infringed the patent by providing software updates to its Kindle devices. Amazon moved for judgment on the pleadings, arguing that the '252 patent (and six others) was directed to patent-ineligible subject matter under § 101. The district court agreed, *Personalized Media*, 161 F. Supp. 3d at 335-336, and this court affirmed. 671 F. App'x 777 (Fed. Cir. Dec. 7, 2016), *reh'g denied* (Feb. 9, 2017). Amazon also filed an IPR petition challenging the asserted claims on obviousness grounds. (Appx94-161.)

1. Prior Art

The primary reference in the IPR petition was an article by Daniel Nachbar entitled: "When Network File Systems Aren't Enough: Automatic Software Distribution Revisited" (hereafter, "Nachbar") (Appx1961-1984). Nachbar discloses a system called "track" that "addresses the problem of maintaining software and data on multiple machines running the UNIX operating system." (Appx1972 at Abstract.) The track system delivered software updates over an Ethernet network and was capable of updating many types of software, including the UNIX operating

system.[1]   (Appx1978 (describing updates to twenty computers); Appx1979 (de-

scribing updates to UNIX).) Nachbar also describes "the great ease with which

one can maintain software on machines of different architecture," *i.e.*, different

hardware. (Appx1977.) Amazon showed that Nachbar's disclosure rendered ob-

vious both the Original Claims and the Substitute Claims. (Appx94-161; Appx511-

513.)

2.   PMC's Claim Construction

PMC attempted to distinguish Nachbar based on a construction of "specific

version." (Appx33-35.) Under PMC's construction, the "specific version" identi-

fies a version of an "apparatus," *i.e.*, hardware. (Appx360.) Amazon responded

that PMC's construction was incorrect based on the plain language of the wherein

clause that defines "specific version."   Amazon alternatively argued that, even if

"specific version" were construed to identify hardware as PMC proposed, the

claims would still be unpatentable for obviousness because Nachbar also disclosed

OS updates targeted to specific hardware. (Appx477-478.)

3.   PMC's Contingent Motion to Amend

PMC filed a Contingent Motion to Amend, proposing "contingent claim

amendments" to the challenged claims "if any of those challenged claims are found

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[1] Nachbar contradicts PMC's representation that prior-art OS updates required "manual intervention . . . such as by having a technician physically visit each re-ceiver station location." (Br. at 25.)

unpatentable." (Appx409.) PMC explains on this appeal that its amendments were

intended "to offset the effect of the Board's [claim] construction" in the Institution

Decision. (Br. at 30.) In that Institution Decision, the Board construed "specific

version" to mean a version of an operating system, *i.e.*, software. (Appx252.)

All of the Original Claims recited a "specific version" of programmable de-

vice that "indicates a version of an operating system." (Appx432-446.) All of the

Substitute Claims retained a reference to that OS-indicating "specific version," but

added a "specific *apparatus* version." For example, proposed claim 53 (which

corresponds to original claim 1 and is representative of all the Substitute Claims)

recites in part:

> storing information specifying**: (a)** said specific version
> of said programmable device, wherein said specific ver-
> sion indicates a version of an operating system executing
> on said programmable device and controlling the pro-
> cessing capabilities of said programmable device**, and
> (b) a specific apparatus version of said programmable
> device**;

(Appx432 (added language emphasized).) The claim's first reference to the OS-

indicating "specific version" was retained, as shown above, but other references to

it were removed. For example, later in claim 53 the "specific version" was

changed to "specific **apparatus** version":

> determining whether said specific **apparatus** version is
> said designated **apparatus** version of programmable de-
> vice in response to said control signal;

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(*Id.* (added language emphasized).)　Originally, this claim step recited a compari-

son involving the "specific version," which was required to "indicate[] a version of

an operating system" due to its antecedent basis.　With PMC's amendments, the

claims would no longer require any comparison with that OS-indicating "specific

version."　Instead, the recited comparison step would refer to the "specific appa-

ratus version," which need not indicate an OS version.

4.　The Board's Final Written Decision

The Board's claim-construction analysis focused on two claim steps:

(1) "storing information specifying said *specific version* of said programmable de-

vice, wherein said specific version indicates a version of an operating system exe-

cuting on said programmable device," and (2) "determining whether said *specific*

version is said designated version in response to said control signal."　(Appx6-7

(Board decision); Appx1012 at 286:55-67 ('252 patent, claim 1) (emphasis add-

ed).)　The dispute as to both limitations was whether the term "specific version"

refers to an OS version or a hardware version.　(Appx9-10.)　The Board explained

that PMC's construction, requiring a hardware version, is inconsistent with the

claim language that requires the "specific version" to "indicate[] a version of an

operating system."　(Appx10-14.)　The Board also explained how PMC's construc-

tion is inconsistent with the '252 patent's objective of updating an OS to a new

version (Appx14-17), and how the Board's construction is consistent with the

specification (Appx17-27). The Board thus concluded that "specific version" refers to an OS version. (Appx28.)

Turning to the prior art, the Board agreed with Amazon that "Nachbar discloses updating OS versions on specific machines." (Appx31.) In addition, the Board found that Amazon's secondary reference (Schmidt)[2] disclosed the one claim limitation that Nachbar did not. The Board then found all Original Claims unpatentable for obviousness. (Appx70.) The Board also found that, even if the claims required updates based on a hardware version, Nachbar also taught hardware-specific updates. (Appx31-32.) In reaching these conclusions, the Board credited the testimony of Amazon's expert witness, Dr. Michael Lesk. (*See* Appx2052-2118 (initial declaration); Appx3033-3071 (rebuttal declaration).) PMC is not challenging these obviousness conclusions on this appeal.

With regard to PMC's Contingent Motion to Amend, the Board denied it because "the 'amendment' impermissibly 'seeks to enlarge the scope of the claims of the patent'" in violation of 37 C.F.R. § 42.121(a)(2)(ii).[3] (Appx77.) The Board explained that "original claim 1 *requires* comparing stored OS information," yet

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[2] Schmidt et al., U.S. Patent No. 4,558,413 (Appx1994-2051).

[3] 37 C.F.R. § 42.121(a)(2)(ii) allows the Board to deny entry of an amendment that "seeks to enlarge the scope of the claims of the patent or introduce new subject matter."

"Patent Owner neither argues nor shows" that the Substitute Claims preserve that requirement. (*Id.*)

The Board also explained how PMC's Contingent Motion to Amend supported the Board's construction of "specific version" to require an OS version. (Appx8-9.) Specifically, the Board explained that the Substitute Claims explicitly distinguish between "(a) said specific version of said programmable device" and "(b) a specific ***apparatus*** version of said programmable device." (Appx432 (emphasis added); *see also* Appx9 (Board decision noting distinction).) The Board observed that, when PMC identified written-description support for the "specific version" limitation in the Substitute Claims, PMC relied solely on disclosure of operating systems (Appx412). But when PMC identified support for the specific "apparatus version" limitation, it relied solely on separate disclosure of hardware (Appx412-413). Based on these written-description arguments, the Board found that PMC's Contingent Motion to Amend "contradicts" PMC's claim construction. (Appx8-9.)

5.   The Board's Denial of PMC's Rehearing Request

PMC sought rehearing of the Board's Final Written Decision based on the same arguments it now presents on appeal. (Appx789.) In response, the Board held that PMC failed to identify any matter the Board had misapprehended or overlooked, and that PMC's arguments were meritless. (Appx80-92.)

The Board reiterated its finding that the Contingent Motion to Amend contradicted PMC's claim construction. (Appx83-84.) The Board also explained that PMC's claim construction could not be correct because it "only includes storing general OS information" rather than specific "OS *version* information" as the claims require. (Appx83-84 (emphasis added).) Further, the Board noted that PMC's construction "precludes updating to a newer OS version (as Patent Owner concedes)," even though PMC had "specifically argued that the invention allows 'devices to be updated' and also 'to be updated remotely.'" (Appx84-85.) The Board then explained how the specification supports the Board's construction, and how PMC's attempts to show otherwise were incorrect and internally contradictory. (Appx86-88.)

Relying on its incorrect claim construction, PMC had argued that Nachbar's disclosure of targeting updates to specific physical machines did not disclose reprogramming based on an "apparatus version." (Appx803.) However, the Board found that "Patent Owner fails to explain how any of [its] arguments upset the obviousness analysis of the claims." (Appx90.) For example, PMC had argued that matching an apparatus version would generally reprogram "multiple devices" rather than one specific device as Nachbar described, but the Board responded that the claims do not require multiple devices to be reprogrammed. (Appx90.) Regardless, the Board explained that Nachbar's method could easily be applied to

multiple machines by assigning separate names to each machine. (Appx90-91.)

Accordingly, the Board reiterated its finding that Nachbar renders obvious hardware-specific reprogramming, even under PMC's construction, and even after considering PMC's new arguments in its rehearing request. PMC has not challenged those obviousness findings on this appeal. Nor has PMC addressed the substance of the Board's decision on rehearing.

SUMMARY OF THE ARGUMENT

The Board correctly held that "specific version" identifies an operating system. The Board adhered to the plain language of the claims which recite that "said specific version indicates a version of an operating system." PMC's arguments cannot overcome this claim language.

PMC contends that the Board's construction is inconsistent with the specification. However, PMC admitted to the contrary in its Contingent Motion to Amend and the Board specifically relied on that admission. (Appx7.) PMC's brief fails to address that admission. Moreover, the Board identified where the specification discloses the type of "specific version" that its construction requires. (Appx13-14 (citing disclosure of OS versions including "***versions*** 1.00, 1.10, 2.00, etc. . . . of PC-DOS and MS-DOS").) PMC has no answer except to argue that the disclosure should be disregarded as merely "an introductory passage." (Br. at 52.) The Board correctly rejected that argument because the disclosure describes an important part of the invention that cannot be disregarded. (Appx86.)

Even if PMC could prevail on its claim-construction arguments, it could not show error in the Board's decision to deny its Contingent Motion to Amend. First, the Substitute Claims improperly remove limitations from the Original Claims regardless of PMC's construction. Specifically, the amendments remove the requirement for a comparison to an OS-indicating "specific version." Instead, the

Substitute Claims require a comparison to a "specific apparatus version," which does not indicate an OS version.

Second, even if the Substitute Claims did not remove limitations, they would be unpatentable under § 101. PMC argues that the amendments do not broaden the claims because the "specific apparatus version" in the Substitute Claims is the same as the "specific version" recited in the Original Claims. If that were correct, the Substitute Claims would have the same scope as the Original Claims, which this Court has already held invalid under § 101.

Third, the Board found that the feature PMC relied on to distinguish the Substitute Claims from the prior art—*i.e.*, storing and comparing hardware information—is disclosed in Nachbar. (Appx31-32.) PMC does not dispute that finding here. Thus, the Substitute Claims are also unpatentable for obviousness. These three independent avenues provide alternative grounds for this Court to affirm the Board's denial of PMC's Contingent Motion to Amend.

STANDARD OF REVIEW

PMC's appeal is limited to challenging the Board's construction of the Original Claims and its holding that the Substitute Claims are broader than the Original Claims warranting the denial of PMC's Contingent Motion to Amend. The parties agree that this Court should review the Board's claim construction *de novo* because it rests on no underlying factual findings. (Br. at 39 (citing *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015).)

PMC argues that the denial of its Substitute Claims was "heavily influenced by the allocation of the burden of proof on Patent Owner." (Br. at 40, n.6.) It continues that, if this Court were to hold in *Aqua Products* that the petitioner bears the burden of proof, the Board should be reversed on this basis alone. But PMC never explains how the burden of proof affects a legal question subject to *de novo* review. Accordingly, *Aqua Products* could have no relevance to PMC's challenge to the Board's holding that the Substitute Claims are broader than the Original Claims.

Amazon raises alternative grounds for affirmance under § 101 and § 103. Patent eligibility under § 101 is an issue of law that the Court reviews *de novo*. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1312 (Fed. Cir. 2016). The ultimate determination of obviousness is a legal conclusion, which the Court also considers *de novo*. *Allied Erecting & Dismantling Co. v. Genesis At-*

tachments, LLC, 825 F.3d 1373, 1380 (Fed. Cir. 2016). The Court reviews the

Board's underlying factual findings relating to obviousness for substantial evi-

dence. *Id.* Such underlying findings include findings as to the scope and content

of the prior art, the differences between the prior art and the claimed invention, and

the presence of a motivation to combine. *Id.*

ARGUMENT

I. THE BOARD CORRECTLY CONSTRUED "SPECIFIC VERSION" TO REQUIRE AN OPERATING SYSTEM VERSION.

The Board's construction of "specific version" is correct because it is sup-

ported by the claim language, the specification, the prosecution history, and PMC's

amendments and arguments made during the IPR.

A.   The Claim Language Compels the Board's Construction.

The Board found that the "specific version" recited in the claims must iden-

tify an OS version—not merely hardware. (Appx28.) The Board's construction is

rooted in the plain language of claim 1, which recites that "said specific version in-

dicates ***a version of an operating system*** executing on said programmable device."

(Appx7.)

The "version of an operating system" language was added to the claims by

an examiner's amendment. (Appx1851.) The examiner required that amendment

as a condition for allowance. (*See* Appx1841 ("An examiner's amendment to

place the instant application into conditions for allowance was proposed and agreed upon.").) Before this amendment, the examiner had rejected all pending claims as indefinite. (Appx1746.)

The amendment was necessary because the claims initially recited a specific version of "programmable device," but the specification never mentioned a "programmable device." The amendment resolved this inconsistency by defining the specific version of "programmable device" as a specific version of an "operating system," which the specification did describe (Appx1002 at 265:50-57). The amendment's explicit definitional language, which appears in all claims at issue, is entitled to "primacy" in the claim-construction analysis. *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973, 977 (Fed. Cir. 2014) ("In claim construction, this court gives primacy to the language of the claims, followed by the specification.").

Further, because the "device" in the claims is "programmable," a version of the device is logically defined by its programming, *i.e.*, its operating system. As PMC admitted before the Board, "a generic computer device becomes a specific computer device defined by the specific operating system it employs." (Appx359.) Relying on this admission, the Board rejected PMC's argument that construing a "specific version of said programmable device" to refer to an OS version reads "programmable device" out of the claims.   (Appx22). PMC repeats that rejected argument on appeal (Br. at 47), but fails to address the Board's correct reasoning.

B.   The Claim Language Contradicts PMC's Construction.

PMC's construction of "specific version" is incorrect because an "apparatus version" (which PMC's construction requires) does not "indicate[] a version of an operating system" (as the claims require). PMC attempts to sidestep the requirement for an OS version by proposing a distinction between *specifying* a programmable device version and *indicating* an OS version. (Br. at 47-48 (arguing that the "indicating" requirement is "vague[]" while "specifying" is "specific").) PMC argues that "'indicating' a version of an operating system" does not require specifying the OS version. (*Id.*) But there is no meaningful difference between "specifying" and "indicating" in the context of the claims; PMC used one word and the examiner simply used a synonym in his definitional amendment. (Appx1851.)

PMC attempts to gloss over the fundamental inconsistency between its construction and the claim language by arguing that "information about the particular version of programmable apparatus (e.g., IBM PC, Apple II) can indeed be indicative of the general version of operating system (e.g., DOS versus Apple OS) that will execute on the device." (Br. at 48-49.) PMC made the same argument below but phrased it differently—and the difference is revealing.

PMC told the Board that an apparatus version "can indeed be indicative of the version of operating system," while PMC now argues that the apparatus version "can indeed be indicative" of "the *general* version of operating system (*e.g.*, DOS

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versus Apple OS)." (*Compare* Appx357 *with* Br. at 49 (emphasis added).) PMC's revision on appeal implicitly concedes that an apparatus version does not indicate a *specific* OS version such as MS-DOS 1.00 or 1.10. Rather, PMC argues only that an apparatus version can indicate a generic class of operating systems. The Board correctly rejected that argument, and explained that the "version of an operating system" referred to in the specification is not the *generic* class of operating systems that PMC now advances. (Appx13-14 (identifying passages from the specification describing "*versions* 1.00, 1.10, 2.00, etc." of MS-DOS and PC-DOS, which "show an OS 'version' is more specific than a generic class of OS versions") (emphasis in original).) Thus, the claim language reciting that the specific version "indicates a version of an operating system" contradicts PMC's construction.

After arguing that an apparatus version can indicate a "general" OS version, PMC asserts that "[t]he converse is not true," but fails to explain why that assertion is relevant. (Br. at 49.) Specifically, PMC argues that "[o]ne cannot identify the apparatus version . . . [from] a particular version of operating system," and that Amazon's expert, Dr. Lesk, agrees. (*Id.*) PMC cited the same testimony from Dr. Lesk (Appx3678-3679 at 27:15-29:24) during the IPR, and made the same argument. (Appx357.) The Board accepted Dr. Lesk's testimony, but rejected PMC's argument as failing to "address the scope of the challenged claims." (Appx25-27.) PMC ignores this correct reasoning.

The testimony that PMC cited from Dr. Lesk follows from his opinion that no definitive correspondence exists between hardware and operating systems. (Appx3039-3040 ¶ 13.) This overall lack of correspondence between hardware and operating systems does not help PMC. Rather, it shows that PMC's construction of "specific version" (to require an apparatus version) fails to satisfy the claim language (which requires an OS version) as the Board correctly recognized.

PMC also argues that the preamble of claim 1 shows that the "specific version of programmable device" refers to a hardware version. (Br. at 49.) PMC argues that the preamble "introduces the term 'programmable device of a specific version' with a list of hardware components and does not mention any software or operating system at all." (*Id.*) But the absence of a reference to software in the preamble has no bearing on the explicit requirement for "a version of an operating system" in the body of the claim. Regardless, the hardware recited in the preamble includes a "memory," and the claim recites that the memory stores "operating system instructions." (Appx1013 at 287:1-8.)

PMC addresses two steps that include the term "specific version" in the Original Claims, and discusses each step separately. (Br. at 38, 40-41.) These steps recite: (1) "storing information specifying said specific version . . . ;" and (2) "determining whether said specific version is said designated version . . . ." (Appx1012 at 286:55-67.) By addressing these two steps separately, PMC incor-

rectly suggests that the steps require different specific version information. But both steps recite "*said* specific version" and share a common antecedent basis in the preamble. (*Id.*) Thus, "specific version" has the same meaning in both the "storing" step and the "determining" step of the Original Claims. Indeed, during the IPR, PMC offered a single construction for "specific version," and did not provide separate constructions for the "storing" and "determining" steps. (Appx360.)

PMC also relies on a step of the Original Claims that recites "receiving an information transmission . . . which designates a *designated version* of programmable device." (Br. at 63 (emphasis changed).) Because the Original Claims require that "said specific version *is* said designated version," the meaning of "specific version" also applies to "designated version." (Appx1013 at 287:1-3 (emphasis added).) Accordingly, both the "specific version" and the "designated version" must indicate "a version of an operating system" as the claims recite. (Appx1012 at 286:56-57.)

C.   The Specification Supports the Board's Construction.

The Board's construction comports with the specification. PMC complains that the Board's construction leaves all of the preferred embodiments out of the claim because "the specification describes, and *only* describes, hardware-specific reprogramming." (Br. at 55.) PMC is incorrect because the Board's construction does not exclude the preferred embodiments. The Board explained how its claim

construction encompasses hardware-specific reprogramming. (Appx11-14.) As

the Board explained, "an indication of the OS" also "specif[ies] the hardware exe-

cuting that OS" under the circumstances described in the specification. (Appx13.)

In such circumstances, the OS version information *is* the "information that identi-

fies an apparatus version." (*See* Appx11-13 (Final Written Decision, discussing

"information that identifies an apparatus version" and its usage in the specifica-

tion).) PMC ignores that the Board again explained why its claim construction en-

compasses hardware-specific reprogramming in its Decision Denying Rehearing.

(Appx85.)

The Board acknowledged that an OS version does not *always* identify the

hardware that the OS runs on. (Appx27.) However, in the specification's context

of a "finite network of known hardware devices and their corresponding OSs," an

OS version does identify hardware. (*Id*.) For example, information identifying

MS-DOS version 1.00 corresponds to IBM PC hardware. (Appx14 ("These pas-

sages show . . . that the inventors deemed OS versions 1.00, 1.10, etc., of PC-DOS

and MS-DOS to be specific to executing on an IBM PC.").) Thus, contrary to

PMC's argument, the Board correctly concluded that its construction encompasses

"hardware-specific reprogramming." (Appx27-28.)

PMC's argument erroneously assumes that the specification's "information

that identifies an apparatus version" refers to a literal description of the hardware

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(*e.g.*, "IBM PC"). However, the specification does not describe what form the information takes or precisely what its contents are. The specification describes the information solely by its purpose—any "information" that "identifies" the apparatus version will suffice. (Appx1003-1004 at 268:56-269:3.) Thus, when OS information identifies the corresponding hardware, it meets the specification's description. As the Board explained, "The passages do not preclude specifying 'an IBM PC' by its specific OS." (Appx12.)

PMC further contends that the Board's construction is incorrect because it requires updates based on OS version information, while the specification provides no support for such updates. (Br. at 53.) The Board rejected this argument, observing that PMC's Contingent Motion to Amend contradicted its argument by admitting that the specification "inherently disclosed" the use of OS version information. (Appx8.) On appeal, PMC simply ignores its admission and the Board's reliance on it.

The Board also identified a passage in the specification that introduces the concept of OS versions and explains that "later [OS] versions generally have expanded capacities in comparison to earlier versions." (Appx13-14 (quoting Appx1002 at 265:45-57).) PMC argues that this is "merely an introductory passage" (Br. at 52)—or as PMC characterized it below, merely "a background passage" (Appx796). The Board expressly rejected that argument:

> No precedent cited by Patent Owner requires us to ignore a disclosure in a 'background passage' if it provides support for a claim construction. Furthermore, the cited passage is not a 'background passage'—it describes one of the invention's important purposes of updating as explained in the Final Written Decision.

(Appx86.) On appeal, PMC never acknowledges the Board's reasoning.

PMC also argues that the specification's disclosure of OS versions does not address "the key issue of ***how to*** reprogram programmable devices." (Br. at 52.) However, the same paragraph of the specification that the Board identified describes how memory containing "operating system instructions" may "be conveniently overwritten" thereby "expanding system functions." (Appx1002 at 265:45-51.) PMC also argues that "[n]ever once does the specification describe reprogramming by comparing versions of operating systems." (Br. at 52-53.) But the Board repeatedly quoted the specification's disclosure of "comparison to earlier versions" of operating systems, which appears in the same paragraph discussing overwriting OS instructions. (Appx1002 at 265:53-57.) PMC fails to address this portion of the specification despite the Board's reliance on it. (Appx14-15.)

Finally, PMC argues that the Board misinterpreted the claims based on an erroneous "preconception that the invention somehow ***requires*** 'updating' OS instructions to a newer or the latest version." (Br. at 53-54 (emphasis added).)

However, the Board made no such error. As the Board explained:

> We also did not reason that every disclosed embodiment 'must update' the OS. Rather, we reasoned that the challenged claims must be broad enough *to cover* the disclosed updating embodiments. *See* FWD 14 ('our construction provides for updates').

(Appx86.) PMC offers no response to the Board's explanation.

D.   The Specification Contradicts PMC's Construction.

PMC argues that its interpretation of a "specific version of said programmable device" as an apparatus version is consistent with an example in the specification. (Br. at 49-52.)   However, the portions of the specification that PMC cites (Appx1002-1006 at 265:20-273:25) do not use the term "programmable device" at all. They refer to an "apparatus version," but never suggest that the apparatus version "indicates a version of an operating system" as the claims require.

Because the "specific version" in the claims cannot simply mean "apparatus version," PMC is constrained to argue that the "specific version" is "a ***variation*** of an apparatus version . . . [that] is ***also*** used to indicate a version of an operating system executing on the programmable device." (Br. at 49-50 (emphasis added).) The specification discloses no such variation.

As explained above, the apparatus version described in the specification indicates, at most, a generic class of operating systems. An apparatus version does not indicate a specific version of an operating system because a single apparatus

version such as an "IBM PC" may run a variety of operating systems and OS versions, such as MS-DOS and PC-DOS versions "1.00, 1.10, 2.00, etc." (Appx1002 at 265:53-57.)

PMC admits that its alleged invention is meant to support upgrades to a "new version of OS software," among other possibilities. (Br. at 27.) But as the Board explained below, the claimed invention would not be able to upgrade an OS under PMC's construction. (Appx14.) For example, to upgrade computers in a network from MS-DOS version 1.00 to version 1.10, it would be necessary to first identify the computers in the network that are running MS-DOS to avoid inadvertently modifying computers running other operating systems such as PC-DOS. (Appx16.) However, it would not be possible to identify the computers running MS-DOS using the information required by PMC's construction.

PMC's construction requires a hardware version, which does not specify an OS version as explained above. For example, a match to a hardware version would not indicate whether the receiver is running MS-DOS or PC-DOS. Thus, replacing operating system instructions based on a hardware version match could result in MS-DOS instructions improperly replacing instructions from PC-DOS, a different operating system. (*See* Appx16.) As the Board recognized, this problematic result occurs only under PMC's construction. (Appx16-17.) The Board's construction

allows the claimed method to achieve the specification's goal of updating an OS to a new version; PMC's construction does not. (*Id.*)

E.   PMC's Reliance on the Prosecution History Is Misplaced.

According to PMC, "the prosecution history teaches that . . . the only comparison is between versions of hardware/apparatus"—not between versions of operating systems. (Br. at 62.) However, PMC relies on remarks in the prosecution history that discuss claim language that does not appear in the Original or Substitute Claims: "said specific *type or* version of said programmable device." In the examiner's amendment explained above, that language was removed before the patent issued. (Appx1851.) That same amendment also added the claim limitation "a version of an operating system." (*Id.*) Because the remarks PMC cites relate to a limitation not recited in the claims, and predate the OS-version limitation, they are irrelevant.

The prosecution history supports the Board's construction because it shows that the examiner conditioned the allowance of the '252 patent on an amendment that explicitly requires the "specific version of said programmable device" to indicate "a version of an operating system." *Supra*, I.A.

F.   PMC's Motion to Amend Further Supports the
Board's Construction.

The Substitute Claims, and PMC's representations about them in the Contingent Motion to Amend, support the Board's construction of "specific version."

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Those claims distinguish between "(a) said specific version of said programmable device" and "(b) a specific ***apparatus*** version of said programmable device." (Appx432 (emphasis added).) The Substitute Claims thus assume that the "specific version" is an OS version. Because PMC appeals the Board's refusal to enter the Substitute Claims, not the cancellation of the Original Claims, it cannot escape the assumption that underlies its Contingent Motion to Amend.

PMC's amendments, premised on the Board's construction, are now part of the prosecution history. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361-1362 (Fed. Cir. 2017). The Substitute Claims must be construed in a manner consistent with that prosecution history. *Id.* The only reasonable construction is the one PMC assumed when it drafted the amendments—namely, the Board's construction.

PMC's construction makes no sense in the Substitute Claims because it equates the term "specific version" with the separately recited "specific apparatus version." By converting two separate limitations into one, PMC would improperly read limitations out of the claims. *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) ("claims are interpreted with an eye toward giving effect to all terms in the claim").

Also, PMC's Contingent Motion to Amend was required to identify written description support for the Substitute Claims in the specification of the '252 patent.

37 C.F.R. § 42.121(b)(1). PMC relied solely on the specification's disclosure of operating systems to support the "specific version" limitation. (Appx412.) But it relied on separate disclosure of hardware to support the "specific apparatus version" limitation. (Appx412-413.) Thus, PMC treated the "specific version" limitation as referring to an OS version—consistent with the Board's construction that PMC now disputes. The Board recognized this, and explained how PMC's Contingent Motion to Amend supported the Board's construction. (Appx8-9; Appx83-84.) PMC neither acknowledges nor responds to the Board's conclusion.

The literal claim language, the specification, the original prosecution history, and the Contingent Motion to Amend all show that the Board's construction was correct. Accordingly, the Board correctly concluded that the Substitute Claims broadened the Original Claims, and properly denied PMC's Contingent Motion to Amend.

II.   EVEN UNDER PMC'S CONSTRUCTION, THE PROPOSED AMENDMENTS WOULD BROADEN THE CLAIMS.

Even if PMC's claim construction arguments were accepted, the Substitute Claims would be broader than the Original Claims. Although the Board did not consider how the Substitute Claims would still be broader under PMC's construction, this alternative ground is one of several upon which this Court could rely to affirm the Board's denial of PMC's Contingent Motion to Amend.

PMC's amendments to representative claim 1 are reproduced below (with added language emphasized):

> 53. (**Substitute for claim 1, if found unpatentable**) A method of reprogramming a receiver station, said receiver station including a programmable device of a specific version having a memory, a signal detector, and a receiver operatively connected to said signal detector, said method comprising the steps of:
>
> [a]   storing information specifying**: (a)** said specific version of said programmable device, wherein said specific version indicates a version of an operating system executing on said programmable device and controlling the processing capabilities of said programmable device**, and (b) a specific apparatus version of said programmable device**;
>
> [b]   receiving**, from a transmitter station**, an information transmission at said receiver, said information transmission including a control signal which designates a designated **apparatus** version of programmable device;
>
> [c]   passing said information transmission to said signal detector and detecting said control signal;
>
> [d]   determining whether said specific **apparatus** version is said designated **apparatus** version **of programmable device** in response to said control signal;
>
> [e]   communicating operating system instructions to said memory only when said step of determining determines that said specific **apparatus** version is said designated **apparatus** version, wherein said communicating comprises erasing any operating system instructions stored within an erasable portion of said memory and then storing said communicated operating system instructions within said erasable portion of said memory; and

> [f]   executing said communicated operating system in-
> structions to control operation of said programmable de-
> vice.

(Appx432-433 (added language emphasized).)

The amendments recite "a specific *apparatus* version" in many of the claim limitations and distinguish it from the originally recited "specific version." (*Id.* (emphasis added).) In limitation [a] subpart (a), a "wherein" clause modifies the originally recited "specific version" and requires it to "indicate[] a version of an operating system." (*Id.*) But no such requirement applies to the newly recited "specific apparatus version" in limitation [a] subpart (b). (*Id.*)

The amendments then replace several references to the original, OS-indicating "specific version" with references to the newly recited "specific apparatus version." For example, limitation [d] of Substitute Claim 53 recites:

> determining whether said specific **apparatus** version is
> said designated **apparatus** version of programmable de-
> vice in response to said control signal;

(*Id.* (added language emphasized)) Originally, limitation [d] required a comparison involving the "specific version," which, due to its antecedent basis in limitation [a] had to "indicate[] a version of an operating system." But PMC's amendments severed that antecedent basis by adding the word "apparatus" in limitation [d] so that the claim no longer requires any comparison of information that indicates an OS version. Rather, the claim requires a comparison with the "specific

apparatus version," which is not required to "indicate[] a version of an operating system." The Substitute Claims therefore remove a requirement from the Original Claims and violate 37 C.F.R. § 42.121, regardless of PMC's construction.

The diagram below shows the shift in antecedent basis that changes the version information used in the comparison step and thereby eliminates a requirement of the Original Claims.

53. (*Substitute for claim 1, if found unpatentable*)
A method of reprogramming a receiver station, said receiver station including a programmable device of a specific version having a memory, a signal detector, and a receiver operatively connected to said signal detector, said method comprising the steps of:

    storing information specifying: (a) said specific version of said programmable device, wherein said specific version indicates a version of an operating system executing on said programmable device and controlling the processing capabilities of said programmable device, and (b) a specific apparatus version of said programmable device;

    receiving, from a transmitter station, an information transmission at said receiver, said information transmission including a control signal which designates a designated apparatus version of programmable device;

    passing said information transmission to said signal detector and detecting said control signal;

    determining whether said specific apparatus version is said designated apparatus version of programmable device in response to said control signal;

                * * *

Original Antecedent Basis (green annotation)

Substitute Antecedent Basis (red annotation)

(*See* Appx432-433 (Substitute Claim 53) (annotated).)

PMC's construction exacerbates the broadening problem. PMC's construction defines the "specific version" as "***a variation*** of an apparatus version of a pro-

grammable device wherein the apparatus version of the programmable device is *also used to indicate a version of an operating system* executing on the programmable device." (Br. at 40-41 (emphasis changed).) Under that construction, the originally recited "specific version" is narrower than a simple apparatus version; it is a "variation" (*i.e.*, a sub-type) of apparatus version with a particular OS-indicating characteristic. By replacing that "variation" of an apparatus version with a wholly *generic* apparatus version in several claim steps, PMC's amendments would remove limitations from the claims and enlarge their scope. Thus, the claim amendments are improper and the Board properly declined to enter them.

III.   THE SUBSTITUTE CLAIMS ARE UNPATENTABLE UNDER SECTION 101.

A.   PMC's Arguments Imply that the Substitute Claims Would Have the Same Scope as the Invalidated Original Claims.

The Board's decision can also be affirmed because the Substitute Claims are unpatentable under § 101. Specifically, PMC's arguments imply that the Substitute Claims would have the same scope as the Original Claims—which this Court has already invalidated under § 101. *PMC*, 671 F. App'x 777. PMC attempts to avoid this pitfall by arguing that the Substitute Claims are narrower than the Original Claims, but that argument fails. Indeed, PMC's own statements contradict it.

According to PMC, "[amended claim] 53 narrows claim 1 by specifically reciting that the comparison is between 'said specific <u>apparatus</u> version of said pro-

grammable device' versus 'said specific version of said programmable device.'"
(Br. at 44.) However, PMC contradicts itself in the next sentence by arguing that claim 53 is "[j]ust like original claim 1" in that it "is conditioned upon a match of hardware versions, not a match of software versions." (*Id.*) If claim 1 already required a match of hardware (*i.e.*, apparatus) versions as PMC asserts, adding the word "apparatus" would not narrow the claim.

Assuming PMC is correct in its assertion that claim 53 is "[j]ust like original claim 1," claim 53 is unpatentable under § 101 for the reasons this Court has already recognized. *PMC,* 671 F. App'x 777. The addition of the word "apparatus" to the Substitute Claims cannot change the outcome. Indeed, this Court was fully aware of PMC's argument that the claims require hardware versions when it affirmed the invalidity of the Original Claims. *See PMC*, No. 2015-2008 (§ 101 appeal), ECF No. 28 (Opening Brief) at 45 (arguing that the "specific version" in the claims of the '252 patent "must be construed as a 'specific *hardware* version of the programmable device'") (emphasis in original); ECF No. 47 (Reply Brief) at 17 (asserting that "the relevant comparison pertains to *hardware*" and "the patented method checks the *hardware* version") (emphases in original). Thus, PMC's arguments imply that the Substitute Claims are invalid for the same reasons as the Original Claims and the Board's decision below can be affirmed on that alternative basis.

B.   Independent of Claim Construction, the Substitute Claims Are Invalid Under Section 101.

The Substitute Claims are invalid under § 101 regardless of which claim construction is adopted. Nothing in the amendments changes whether the claims recite an abstract idea, or provide the additional inventive concept needed to satisfy § 101.

1.   The Substitute Claims Are Directed to an Abstract Idea.

The Substitute Claims, like the Original Claims, are directed to the abstract idea of "updating operating instructions." *See PMC*, 161 F. Supp. 3d at 332. As the district court determined with regard to the Original Claims: "Other than the fact that the method is implemented on a computer, it is no different from checking to see if a copy of the Federal Rules is up to date and, if it is not, replacing it with a new one." (*Id.*) The specification admits that updating a computer's operating system instructions was routine long before PMC filed its patent applications. (*See* Appx1002 at 265:36-57.) PMC has never disputed that, for as long as computers have existed, users have been obtaining OS updates on disk and manually in-stalling them. Indeed, PMC's own expert admitted that that "providing operating system updates has occurred for as long as operating systems have been used." (Appx3472-3473 at 16:21-17:9.)

The claims are abstract also because they recite the mere manipulation of in-formation. Information (a "designated version") is received, compared to infor-mation stored at the computer (the "specific version"), and if a match results, other information (the update) is stored in memory. That process is plainly abstract. *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350-51 (Fed. Cir. 2014).

Updating a computer's operating system instructions is no different than up-dating any other instructions in any other environment—technical or otherwise. And yet, even if the idea had not existed before the advent of computers, this alone would not save the claims. *See Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015) ("the idea of retaining information in the naviga-tion of online forms," which did not did not exist before the advent of computers, is abstract).

While the Substitute Claims require a match between hardware versions ra-ther than software versions, this makes no difference to the § 101 analysis. Even under PMC's construction, the claim simply automates a process previously per-formed in the user's mind. In the manual process, a user would verify that the up-date they were installing was appropriate for the hardware (*e.g.*, the update was compatible with an IBM PC). As PMC's expert admitted, even "hardware-specific

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software updates have been around as long as computers have been used."

(Appx3472-3473 at 16:21-17:9.)

2.   The Substitute Claims Recite No Inventive Concept.

PMC has never disputed that the methods claimed in the '252 patent are performed on generic computers, in a generic network, that perform routine computer functions. Claim 53 recites a generic "receiver station" having a generic "programmable device," a generic "signal detector," and a generic "receiver." The specification admits that these components were all conventional. (Appx970 at 201:56-61 (the "receiver station" may be any location where programming is displayed); Appx1003 at 268:12-17 (the "programmable device" may be an Apple II microcomputer, which was "well known in the art"); Appx878 at 18:54-55 (the receiver is a "standard line receiver" that was "well known in the art"); *id.* at 18:57-63 (the detector uses "standard detection techniques well known in the art"); Appx879 at 19:25 (the detector may be a "standard digital detector").) The claim requires these components to perform only their well-understood, routine functions, such as storing information, receiving information, detecting embedded information, and executing instructions.

While the Substitute Claims target updates to a hardware version rather than software, this distinction makes no difference under § 101. As explained above, updating instructions based on hardware has been done for as long as computers

have existed. Accordingly, the hardware version cannot supply an inventive con-

cept.

Any argument that the Substitute Claims reflect a technology-specific prob-

lem and solution would be meritless. The problem addressed here has a clear pre-

computer analog, as paper operating instructions have always required updating.

This problem also existed with computer OS instructions before the development

of computer networks, where updating was done manually. Thus, the claims recite

merely performing an old practice (*i.e.*, updating instructions by comparing hard-

ware version information) on a generic computer network.

Accordingly, the Substitute Claims are unpatentable under § 101 regardless

of claim construction.

C.   PMC Failed to Address Amazon's Section 101 Arguments.

During the IPR, Amazon explained that the Substitute Claims are directed to

ineligible subject matter for the same reasons as the Original Claims. (Appx503-

504.) PMC's only response was to argue that the Original Claims satisfied § 101,

and that the Substitute Claims' repeated references to apparatus versions made

them "palpable and concrete." (Appx550-554.) But this Court has since affirmed

the invalidity of the Original Claims, and in doing so implicitly held that targeting

hardware versions rather than OS versions (which PMC emphasized throughout

that appeal) was insufficient to satisfy § 101. Thus, the arguments PMC raised be-

low on § 101 were implicitly rejected in the previous appeal to this Court. PMC's appeal brief ignores that the Substitute Claims are unpatentable under § 101.

D. No Question of Fact Precludes Affirmance Based on Section 101.

In a companion appeal pending before this Court, PMC argued on Reply that "this Court is not free to affirm the Board's decision using patent eligibility as an alternative ground unless the analysis requires no factual determination or agency expertise." *PMC v. Amazon*, No. 16-2606 (Fed. Cir.), ECF No. 50 at 25 (Sept. 5, 2017). PMC relied on *Sec. & Exch. Comm'n v. Chenery Corp.*, 318 U.S. 80, 88 (1943), but that reliance is misplaced. *Chenery* merely explained the basic rule that appellate courts should not "take the place of [a] jury" by making "a determination of fact which only a jury could make." *Id.* The Court continued that "[l]ike considerations govern review of administrative orders," so that appellate courts should not make "a determination of policy or judgment which the agency alone is authorized to make." *Id.*

But *Chenery* in no way suggests that appellate courts are precluded from determining facts apparent from the record, from a party's admissions, or by judicial notice. Those facts often allow courts to decide the legal question of patent eligibility under § 101 on a Rule 12 motion. *See Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1373 (Fed. Cir. 2016). This Court has observed that "the practice of taking note" of "technological developments" to resolve § 101 questions is

"well supported" by this Court's precedents. *Affinity Labs of Texas, LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1270 (Fed. Cir. 2016). Most importantly, this Court has already held that *Chenery* does not prevent it from affirming the Board based on § 101 where the Board rejected the appellant's claims on different grounds. *In re Comiskey*, 554 F.3d 967, 973-75 (Fed. Cir. 2009). This Court explained: "*Chenery* not only permits us to supply a new legal ground for affirmance, but encourages such a resolution where, as here, '[i]t would be wasteful to send' the case back to the agency for a determination as to patentable subject matter." *Id.* at 975. Sending this case back to the Board would be wasteful because there is no factual dispute that could affect the outcome of the § 101 analysis.

Before the Board, PMC submitted an expert declaration by Dr. Alfred Weaver regarding § 101, but that declaration is irrelevant. Most of the declaration's discussion of the '252 patent relates to the Original Claims, which this Court has already held are invalid under § 101. (Appx4813-4816.) Regarding the Substitute Claims, Weaver offers only two opinions. First, Weaver asserts that the Substitute Claims are "directed to a specific technical problem which is how to maintain up-to-date operating systems in a computer network including transmitting stations and a myriad of receiver stations (i.e., client devices) that have different apparatus versions and different operating system versions." (Appx4816 at ¶ 87.) However, Weaver never identifies any solution to this alleged problem, and

therefore fails to show that the solution is technology-specific. Even if the problem were technology-specific, that would not be sufficient to satisfy § 101. For example, the claims in *Internet Patents* addressed the problem of "retaining information in the navigation of online forms," but still failed to satisfy § 101. 790 F.3d at 1348. Here, the Substitute Claims provide no technology-specific solution because they rely on merely comparing version information, which is no different from the way that paper instructions are updated.

Second, Weaver opines that the "apparatus version" in the Substitute Claims "explicitly ties the claimed invention to computer hardware." (Appx4816 at ¶ 88.) That testimony is of no moment. Generic recitations of computer hardware do not satisfy § 101. *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2357-2358 (2014). Because Weaver's declaration is irrelevant, it cannot show that the Substitute Claims pass § 101. *Affinity Labs*, 838 F.3d at 1270 n.3.

IV. THE SUBSTITUTE CLAIMS ARE UNPATENTABLE UNDER SECTION 103.

During the IPR, Amazon showed that PMC's Substitute Claims were also unpatentable under § 103. (Appx511-513.) While the Board did not need to reach the ultimate obviousness issues, it made all the necessary factual findings to support affirmance based on obviousness.

Specifically, the Board found that Nachbar and Schmidt teach or suggest every limitation of the Original Claims. (Appx30-63.) The Board also found that

a person of ordinary skill would have been motivated to combine Nachbar and Schmidt in the manner Amazon described. (Appx30-49.) Finally, the Board found that PMC's "evidence of indicia of nonobviousness is entitled to little or no weight" because PMC failed to show a nexus between its claims and the evidence it offered. (Appx63-68.) The Board's extensive citations to the record and its well-articulated reasoning show that these findings are all supported by substantial evidence. Indeed, PMC does not challenge those findings or the Board's ultimate conclusion that the Original Claims would have been obvious. (*See* Appx30-68 (the Board's analysis, supported by over 100 citations to the record).)

In its Contingent Motion to Amend, PMC relied exclusively on the "apparatus version" in the Substitute Claims to show patentability over the prior art. (Appx426-429.) But Amazon showed that Nachbar discloses the use of apparatus versions in the form of a file path that designates particular physical hardware. (Appx511-513.) The Board agreed. (Appx31-32.) ("Petitioner maintains that, even if the challenged claims require storing and comparing hardware information, Nachbar discloses that feature or renders it obvious. . . . The record supports Petitioner's position.").

On appeal, PMC never addresses the Board's findings regarding Nachbar. PMC offers only an unsupported assertion that "OS reprogramming by matching hardware versions . . . is different from the prior-art approaches." (Br. at 27) But

Nachbar contradicts PMC's assertion (Appx511-513), and PMC makes no attempt to address this reference.

Substantial evidence supports the Board's finding that Nachbar teaches hardware-specific OS updates. (*See* Appx3067-3069 at ¶¶ 68-72.) As the Board found, Nachbar describes "the great ease with which one can [] maintain software on machines of different architectures." (Appx1977.) More specifically, Nachbar states that OS updates can be targeted to specific physical machines having arbitrary machine names such as "gorp." (Appx511-513 (citing Appx1977-1978).) Nachbar explains that an OS update for a machine named "gorp" could be stored at a corresponding file path such as "/sys/conf/GORP/vmunix," separate from OS updates for other specific machines. (*Id.*)

PMC argued below that a name like gorp "does not necessarily have anything to do with the underlying hardware" and thus is not an "apparatus version." (Appx556.) But PMC is incorrect because such names uniquely identify the underlying hardware. (Appx1977-1978.) PMC seems to suggest that the apparatus version must literally describe the underlying hardware, but that is also incorrect. PMC recognizes that an apparatus version could be an arbitrary phrase referring to a particular device. (Br. at 34 (arguing that "the hardware version of a decoder 203 could be 'the specific version from Example #1' or 'the specific version from Ex-

ample #3,' and so forth").) The examples PMC refers to are no different from machine names such as "gorp." (Appx41-42).

In sum, the Board found: (1) Nachbar and Schmidt teach or suggest every limitation of the Original Claims, (2) Nachbar teaches or suggests the "apparatus version" that PMC added to the Substitute Claims, (3) a person of ordinary skill would have combined Nachbar with Schmidt, and (4) PMC's evidence of objective indicia has no nexus to the Original Claims, which PMC contends are just like the Substitute Claims. Based on these well-supported findings, the Substitute Claims would have been obvious over Nachbar combined with Schmidt and the Board's decision to deny PMC's Contingent Motion to Amend can be affirmed on that alternative ground.

CONCLUSION

PMC has failed to show that the Board erred in construing the Original Claims and concluding based on its construction that the Substitute Claims were broader than the Original Claims. Accordingly, this Court should affirm the Board's decision denying PMC's Contingent Motion to Amend.

Alternatively, this Court can affirm the Board because the Substitute Claims are unpatentable under § 101 and § 103.

Respectfully submitted,

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF SERVICE

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Respectfully submitted,

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