

Table of Contents

I. BACKGROUND..... 4

II. LEGAL PRINCIPLES 7

III. AGREED TERMS..... 12

IV. DISPUTED TERMS IN PATENTS ASSERTED BY USAA AGAINST PNC..... 13

1. “mobile device” / “mobile device associated with an image capture device” / “digital camera” / “portable device” 14

2. “checking for errors” 21

3. “instructing,” “giving an instruction,” “assisting the customer with lighting,” “displaying a graphical illustration,” “control[ing] display of instructions,” “displaying,” “assisting the user,” “assist[ing] the customer,” and “giving an instruction” 24

4. “bank computer” and “third-party vendor computer” 24

5. “a computing device for processing a remote deposit of a check, the computing device comprising” and “a method for controlling a computing device to process a remote deposit of a check, the method comprising” 25

6. “first processing circuitry” / “second processing circuitry” 29

7. “suitable for creating a substitute check” 32

8. “an image capture and processing system for use with optical character recognition (OCR)” / “an image capture and processing system for use with a digital camera” and “a system for allowing a customer to deposit a check using the customer’s own mobile device with a digital camera” / “a system for allowing a customer to deposit a check using a customer’s own handheld mobile device with a digital camera” 34

9. “general purpose computer” 36

10. “submitting the check for [mobile check] deposit” 38

11. “PDA” 39

12. “a non-transitory computer-readable medium comprising computer-readable instructions] for depositing a check” / “[a system] for depositing a check” 40

13. “mobile device” 43

14. “passes the monitoring criterion” 45

15. (a) “capture the image of the check [with / using] the camera” / “capture the image of the check” and (b) “when the image of the check [in the field of view] passes the monitoring criterion” 49

16. “feedback . . . regarding the image of the check with respect to the monitoring criterion” 56

17. “image monitoring and capture module” 59

18. “instructions that provide feedback” / “feedback” / “feedback comprises instructions”... 65

19. “deposit system” 66

20. (a) “determin[ing] whether the image of the check aligns with the alignment guide” / “the image of the check is determined to align with the alignment guide” and (b) “when

the image of the check is determined to align with the alignment guide” and (c) “when at least [one edge / a first edge and a second edge / a first edge, second edge, and a third edge] of the image of the check aligns” 67

V. DISPUTED TERMS IN PATENTS ASSERTED BY PNC AGAINST USAA 73

- 21. “external system” 73
- 22. “the message to be transmitted to an external system” 78
- 23. “verifying access and transmission rights of the data source system and the external system” 81
- 24. “secure service router” 84
- 25. “message transformation logic module / transforming the message / response transformer / transforming the response” and “transforming the request / transform the response / transforming . . . the response” 88
- 26. “second keystore coupled to the web server” 96
- 27. “bar” 98
- 28. “wherein the second bar is positioned within the first bar,” “wherein the third bar is positioned within the fourth bar,” and “wherein the fifth bar is positioned within the sixth bar” 106
- 29. “estimating income to the customer during the first / second / third time period” 112
- 30. “graphical banking interface” 115
- 31. “graphical representation” 118
- 32. “accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds” 123
- 33. “transferring the amount of funds from at least one receiving account to the funding account on the date of intended use” 127

VI. CONCLUSION 129

I. BACKGROUND

USAA alleges infringement of United States Patents No. 8,699,779 (“the ’779 Patent”), 8,977,571 (“the ’571 Patent”), 10,013,605 (“the ’605 Patent”), 10,013,681 (“the ’681 Patent”), 10,482,432 (“the ’432 Patent”), and 10,621,559 (“the ’559 Patent”) (collectively, “the USAA Patents”). (Dkt. No. 197, Exs. 1–6). USAA submits that “[t]he asserted patents relate to mobile remote deposit capture (‘MRDC’) technology.” (Dkt. No. 197, at 1.)

The ’779 Patent, titled “Systems and Methods for Alignment of Check During Mobile Deposit,” issued on April 15, 2014, and bears a filing date of August 28, 2009. The Abstract of the ’779 Patent states:

An alignment guide may be provided in the field of view of a camera associated with a mobile device used to capture an image of a check. When the image of the check is within the alignment guide in the field of view, an image may be taken by the camera and provided from the mobile device to a financial institution. The alignment guide may be adjustable at the mobile device. The image capture may be performed automatically by the camera or the mobile device as soon as the image of the check is determined to be within the alignment guide. The check may be deposited in a user’s bank account based on the image. Any technique for sending the image to the financial institution may be used.

The ’571 Patent, titled “Systems and Methods for Image Monitoring of Check During Mobile Deposit,” issued on March 10, 2015, and bears a filing date of August 21, 2009. The Abstract of the ’571 Patent states:

An image of a check that is in the field of view of a camera is monitored prior to the image of the check being captured. The camera is associated with a mobile device. When the image of the check in the field of view passes monitoring criteria, an image may be taken by the camera and provided from the mobile device to a financial institution. The image capture may be performed automatically as soon as the image of the check is determined to pass the monitoring criteria. The check may be deposited in a user’s bank account based on the image. Any technique for sending the image to the financial institution may be used. Feedback may be provided to the user of the camera regarding the image of the check in the field of view.

The '605 Patent, titled "Digital Camera Processing System," issued on July 3, 2018, and bears an earliest priority date of October 31, 2006. The Abstract of the '605 Patent states:

A digital camera processing system with software to manage taking photos with a digital camera. Camera software controls the digital camera. A downloaded software component controls the digital camera software and causes a handheld mobile device to perform operations. The operations may include instructing a user to have the digital camera take photos of a check; displaying an instruction on a display of the handheld mobile device to assist the user in having the digital camera take the photos; or assisting the user as to an orientation for taking the photos with the digital camera. The digital camera processing system may generate a log file including a bi-tonal image formatted as a TIFF image.

The '681 Patent, titled "System and Method for Mobile Check Deposit," issued on July 3, 2018, and bears an earliest priority date of October 31, 2006. The Abstract of the '681 Patent states:

Machine-readable storage media having instructions stored therein that, when executed by a processor of a mobile device, configure the mobile device to capture a check image for deposit and read a MICR line of the received check image. The mobile device is configured to present electronic images of the check to the user after the electronic images are captured. The mobile device may be configured to confirm that the deposit can go forward after optical character recognition (OCR) is performed on the check, the optical character recognition (OCR) determining an amount of the check, comparing the OCR determined amount to an amount indicated by the user, and reading a MICR line of the check.

The Court previously construed disputed terms in the '571 Patent, the '779 Patent, the '605 Patent, and the '681 Patent in:

United Services Automobile Association v. Wells Fargo Bank, N.A., No. 2:18-CV-245, Dkt. No. 100 (E.D. Tex. June 13, 2019) (Payne, J.) ("*Wells Fargo I*" or "the -245 Case") (construing disputed terms in the '779 Patent and the '571 Patent); and

United Services Automobile Association v. Wells Fargo Bank, N.A., No. 2:18-CV-336, Dkt. No. 57 (E.D. Tex. July 29, 2019) (Payne, J.) ("*Wells Fargo II*" or "the -336 Case") (construing disputed terms in patents including the '605 Patent and the '681 Patent).

USAA submits that the '432 Patent and the '559 Patent “are continuations of, and share a specification with, patents that the Court previously construed in *Wells Fargo II.*” (Dkt. No. 197, at 1.)

USAA also notes that the terms in the USAA Patents have been interpreted in *Inter Partes* Review (“IPR”) and Covered Business Method (“CBM”) proceedings at the Patent Trial and Appeal Board (“PTAB”) of the United States Patent and Trademark Office (“PTO”). (See Dkt. No. 197, Exs. 9–11.)

PNC alleges infringement of United States Patents No. 7,949,788 (“the '788 Patent”), 8,380,623 (“the '623 Patent”), 8,682,754 (“the '754 Patent”), and 8,868,786 (“the '786 Patent”) (collectively, “the PNC Patents”). (Dkt. No. 213, Exs. 1–4). PNC submits that the '788 Patent and the '786 Patent “disclose a novel architecture for securely transforming and transmitting messages.” (Dkt. No. 196, at 1.) PNC submits that the '754 Patent “claims an innovative user interface for comparing spending and income for customers performing banking transactions on network-enabled devices such as PCs, ATMs, palmtop computers, or mobile phones.” (Dkt. No. 196, at 17.) PNC submits that the '623 Patent “teaches a new way of organizing and presenting a user’s accounts.” (Dkt. No. 196, at 24.)

The '788 Patent, titled “Apparatus, Systems and Methods for Transformation Services,” issued on May 24, 2011, and bears a filing date of May 18, 2007. The Abstract of the '788 Patent states:

A web services hub receives a request from a data source system, transforms the request, and transmits the transformed request to an external system. A secure service router is coupled to the web services hub. The secure service router authenticates the data source system and locates a transformation service to transform the request.

The '786 Patent issued on October 21, 2014, and is a divisional of the '788 Patent.

The '623 Patent, titled "Systems and Methods for Enabling Financial Savings," issued on February 19, 2013, and bears an earliest priority date of February 8, 2008. The Abstract of the '623 Patent states:

A computer-assisted method for facilitating financial savings. The method includes accepting a funds transfer request by the user of an amount of funds between a funding account and at least one receiving account and accepting, from a user, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds. The method also includes transferring the amount of funds from the funding account to the at least one receiving account and generating, for display on a graphical banking interface, a graphical representation of the designation of the intended purpose of use of the amount of funds. The method further includes transferring the amount of funds from the at least one receiving account to the funding account on the date of intended use.

The '754 Patent, titled "Tracking Customer Spending and Income," issued on March 25, 2014, and bears an earliest priority date of May 12, 2008. The Abstract of the '754 Patent states:

Computer implemented methods of tracking customer spending and income are provided. The methods may comprise aggregating spending transactions by estimating income to a customer during a first time period. The methods may also comprise displaying a user interface to the customer. The user interface may comprise a first bar indicating customer income and a second bar indicating customer spending.

II. LEGAL PRINCIPLES

It is understood that "[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

"In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). "In cases where those

subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*,

the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and

intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office ("PTO") understood the patent. *Id.* at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that "a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation").

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." *Id.* at 1321.

Phillips emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 572 U.S. 898. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

“[P]rior orders in related cases do not bar the Court from conducting additional construction in order to refine earlier claim constructions.” *TQP Dev., LLC v. Intuit Inc.*, No. 2:12-CV-180-WCB, 2014 WL 2810016, at *6 (E.D. Tex. June 20, 2014) (Bryson, J., sitting by designation).

In general, however, prior claim construction proceedings involving the same patents-in-suit are “entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se*.” *Maurice Mitchell Innovations, LP v. Intel Corp.*, No. 2:04-CV-450, 2006 WL 1751779, at *4 (E.D. Tex. June 21, 2006) (Davis, J.); *see TQP*, 2014 WL 2810016, at *6 (“[P]revious claim constructions in cases involving the same patent are entitled to substantial weight, and the Court has determined that it will not depart from those constructions absent a strong reason for doing so.”); *see also Teva*, 135 S. Ct. at 839–40 (“prior cases will sometimes be binding because of issue preclusion and sometimes will serve as persuasive authority”) (citation omitted); *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008) (noting “the importance of uniformity in the treatment of a given patent”) (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996)).

III. AGREED TERMS

In their August 16, 2021 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 170, Ex. A), the parties submitted the following agreements:

<u>Term</u>	<u>Agreed Construction</u>
computing device (’559 Patent, Claims 1–10)	“general purpose computer”
monitoring criterion (’571 Patent, Claims 1–4, 6, 9, 10, 12, 13)	“one or more features of a check image that provide information about the suitability of the image to represent the check”

deposit / deposit a check / [mobile] check deposit ('432 Patent, Claims 1, 16, 17; '681 Patent, Claims 1, 12, 30; '605 Patent, Claims 1, 12)	“a transaction involving provision of a check [using a mobile device] to a depository in a form sufficient to allow money to be credited to an account”
[remote] check deposit / [remote] deposit / [remote] deposit of a check ('559 Patent, Claims 1, 7, 8, 10, 11, 16, 17)	“a [remote] transaction involving provision of a check to a depository in a form sufficient to allow money to be credited to an account”
depositing a check ('571 Patent, Claims 1, 9; '779 Patent, Claims 1, 10)	If preambles are limiting: “providing a check to a depository in a form sufficient to allow money to be credited to an account”
a non-transitory computer readable medium storing an app ('681 Patent, Claim 30)	Preamble is limiting

IV. DISPUTED TERMS IN PATENTS ASSERTED BY USAA AGAINST PNC

As a threshold matter, USAA challenges “PNC’s purported ‘expert,’” arguing that “Dr. Bovik’s testimony is not credible” because “Dr. Bovik is not actually an expert in MRDC [(mobile remote deposit capture)].” (Dkt. No. 197, at 1.) USAA cites a deposition in which Dr. Bovik testified, for example, that he has never built a check image deposit system and is not familiar with “Check 21” requirements. (*See id.*, at 1–2.) USAA does not move to strike Dr. Bovik’s opinions on claim construction, and moreover the Court finds that USAA has not persuasively justified USAA’s implied argument that the Court should disregard Dr. Bovik’s testimony.

1. “mobile device” / “mobile device associated with an image capture device” / “digital camera” / “portable device”

<p>“mobile device” / “mobile device associated with an image capture device” / “digital camera” / “portable device” (’432 Patent, Claims 1, 6, 13, 21, 23; ’559 Patent, Claims 1, 10; ’681 Patent, Claims 1, 4, 5, 8, 11, 12, 30; ’605 Patent, Claims 1, 4, 5, 8, 9, 12)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
<p>mobile device: “handheld computing device”</p> <p>digital camera: No further construction necessary.</p> <p>mobile device associated with an image capture device: “handheld computing device associated with an image capture device”</p> <p>portable device: “computing device capable of being easily moved manually”</p>	<p>mobile device: “computing device capable of being easily moved manually that is separate from the digital camera”</p> <p>digital camera: “digital camera that is separate from the [portable device / mobile device]”</p> <p>mobile device associated with an image capture device: “computing device capable of being easily moved manually associated with a separate image capture device”</p> <p>portable device: “computing device capable of being easily moved manually that is separate from the digital camera”</p>

(Dkt. No. 170, Ex. B, at 1, 3, 7 & 9; Dkt. No. 226, Ex. A, at 2, 9 & 14.)

(a) The Parties’ Positions

USAA proposes the *Wells Fargo II* constructions, arguing that PNC’s proposals are an attempt to present for claim construction an argument that is actually based on purported lack of written description (that “the patents are not using ‘mobile device’ in the ordinary sense because the specification refers to a ‘general purpose computer’ that may be ‘a desktop or laptop computer’ but does not explicitly identify a ‘handheld computer’”). (Dkt. No. 197, at 3 (citation omitted).)

USAA submits that the defendant in *Wells Fargo II* presented this written description argument to a jury and lost, and USAA argues that PNC should not be permitted to reframe this argument as a claim construction argument. (*Id.*) USAA presents a similar argument as to PNC's proposal that the "digital camera" must be separate from the mobile device and further argues that the claims and the specification confirm that a digital camera could be integrated with a mobile computing device. (*See id.*, at 6–9.) USAA also argues that there is no disclaimer that would warrant departing from the usual rule that terms should be given their ordinary meanings, and USAA also argues that "there is detailed disclosure for the use of a handheld device, as well as other devices, in the specification." (*Id.*, at 4.)

PNC responds that although *Wells Fargo II* construed "mobile device" to mean "handheld computing device," "the Court in *Wells Fargo II* did not address the language in the dependent claims on which PNC's proposed construction rests." (Dkt. No. 212, at 4.) PNC argues that the Court should reject USAA's proposal of "handheld" because "[d]ependent claim 9 in the '432 patent and dependent claim 16 in the '681 patent expressly recite that 'the customer's mobile device is a laptop,'" and "[i]ndependent claims 'must be at least as broad as the claims that depend from them.'" (*Id.*, at 3 (quoting *AK Steel Co. v. Sollac*, 344 F.3d 1234, 1242 (Fed. Cir. 2003); citing *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1346 (Fed. Cir. 2020) & 35 U.S.C. § 112(d)).) PNC also argues that "[t]he claims should be interpreted consistently with the specification to require that the claimed 'digital camera' be separate from the claimed computing device." (Dkt. No. 212, at 4–5.) PNC discusses the specification in this regard and also argues that the doctrine of claim differentiation "does not trump the clear import of the specification." (*Id.*, at 6 (quoting *CardSoft, LLC v. Verifone, Inc.*, 807 F.3d 1346, 1352 (Fed. Cir. 2015)).)

USAA replies that “some handheld computing devices are configured as laptops,” and “PNC’s construction would also improperly give ‘mobile device’ and ‘portable device’ the same meaning, even though they are used separately in the claims.” (Dkt. No. 215, at 1 (citation omitted).) As to whether a “mobile device” or “portable device” must be separate from a digital camera, USAA submits that such a limitation appears in a dependent claim, and USAA argues that “PNC identifies nothing in the specification criticizing systems with integrated cameras or purporting to distinguish them from the claimed invention.” (*Id.*, at 1–2.) Finally, USAA argues that “both specifications state that *any* ‘general purpose computer 111 may be in a *desktop or laptop configuration*,’ ’432 Pat., 3:57–59, meaning that it encompasses systems configured with separate components (‘desktop configuration’) or with integrated components (‘laptop configuration’).” (*Id.*, at 3 (citation omitted).)

At the November 10, 2021 hearing, USAA submitted that handheld laptop computers were known at the relevant time and that laptop computers with integrated cameras were also well-known. USAA argued that a “laptop” configuration means that a camera and other components are integrated into a single device. PNC responded that laptops that are not handheld are not covered by these claims.

(b) Analysis

The specification discloses, for example:

A general purpose computer 111 is generally a Personal Computer (PC) running one of the well-known WINDOWS® brand operating systems made by MICROSOFT® Corp., or a MACINTOSH® (Mac) brand computer, running any of the APPLE® operating systems. General purpose computers are ubiquitous today and the term should be well understood. A general purpose computer 111 may be in a desktop or laptop configuration, and generally has the ability to run any number of applications that are written for and compatible with the computer’s operating system. The term “general purpose computer” specifically excludes specialized equipment as may be purchased by a business or other commercial enterprise, for example, for the specialized purpose of high-speed, high-volume

check deposits. A particular advantage of embodiments of the invention is its ability to operate in conjunction with electronics that today's consumers actually own or can easily acquire, such as a general purpose computer, a scanner, and a digital camera.

'432 Patent at 3:32–65.

In *Wells Fargo II*, the Court construed the terms “mobile device” and “portable device” in the '681 Patent and the '605 Patents (as well as in United States Patents No. 8,392,332 and 9,224,136):

[T]he “portable device” and “mobile device” phrases appear only in the claims, suggesting that these terms have their customary meanings; namely, devices that are portable or mobile . . . But “portable device” and “mobile device” are distinct terms in the claims, suggesting that they have different meanings. The Court understands that under its customary meaning, a “mobile device” is distinct from a “portable device” in that the “mobile device” is a handheld device . . . Accordingly . . . “mobile device” means “handheld computing device”; and “portable device” means “computing device capable of being easily moved manually.”

Wells Fargo II at 25 (discussing “mobile device” term in the '681 Patent and the '605 Patent). Claim 12 of the '605 Patent recites a “handheld mobile device,” and this claim was not at issue in *Wells Fargo II* (*see id.* at 20), but the analysis of *Wells Fargo II* regarding the “customary meaning” of “mobile device” is still applicable, even if it may give rise to some amount of redundancy in this particular claim. *See id.* at 25.

The '432 Patent resulted from a continuation of the '681 Patent, and the '559 Patent in turn resulted from a continuation of the '432 Patent. These patents thus have the same specification, and “courts ordinarily interpret claims consistently across patents having the same specification.” *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1325 (Fed. Cir. 2011). The opinions of PNC's expert to the contrary are unpersuasive. (*See, e.g.*, Dkt. No. 212-1, July 21, 2021 Bovik Decl., at ¶ 169.)

PNC cites Claim 9 of the '432 Patent and Claim 16 of the '681 Patent, which recite that “the customer’s *mobile* device is a *laptop*,” and PNC submits that independent claims “must be at least as broad as the claims that depend from them.” *AK Steel*, 344 F.3d at 1242; *see Baxalta*, 972 F.3d at 1346; 35 U.S.C. § 112(d). Even assuming for the sake of argument that the *Wells Fargo II* construction might give rise to internal inconsistency in these dependent claims, this perhaps might result in indefiniteness of those dependent claims (the issue does not appear to be before the Court, so the Court does not further address it), but regardless this does not warrant a broader construction of the term “mobile device” in all of the claims. *See Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1360 (Fed. Cir. 2016) (“The dependent claim tail cannot wag the independent claim dog.”); *see also N. Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1577 (Fed. Cir. 1993) (same).

The distinction between “handheld or laptop devices” in the '571 Patent and the '779 Patent (to the extent it is relevant to the different patents that are at issue for the present disputed term) does not compel otherwise. *See* '571 Patent at 18:31 & '779 Patent at 15:60; *see also Wells Fargo II* at 25 (“The Court understands that under its customary meaning, a ‘mobile device’ is distinct from a ‘portable device’ in that the ‘mobile device’ is a handheld device whereas a ‘portable device’ would encompass a device such as a laptop computer.”). Also, as PNC argues, there may be some overlap between “handheld” and “laptop.” (*See* Dkt. No. 215, at 1.)

PNC also submits that the specification describes the “mobile device” and “digital camera” as being separate. *See, e.g.*, '432 Patent at 3:65–5:3, 13:10–15 & 13:25–27. On balance, the distinction between “mobile device” and “digital camera” in the intrinsic evidence does *not* persuasively support PNC’s contention that they must be separate from one another. *See Powell v. Home Depot USA, Inc.*, 663 F.3d 1221, 1231–32 (Fed. Cir. 2011); *see also Applied Med. Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006) (“the use of two

terms in a claim requires that they connote different *meanings*, not that they necessarily refer to two different *structures*”) (citation omitted). The *Retractable* case cited by PNC does not compel otherwise. *See Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011). USAA also submits evidence that computing devices incorporating digital cameras and other components in a single device were well known at the time of the claimed invention in 2006. (*See* Dkt. No. 197, Ex. 14, June 1, 2021 Mott Decl., at ¶ 37.) The opinions of PNC’s expert regarding separation are unpersuasive. (*See* Dkt. No. 212-1, July 21, 2021 Bovik Decl., at ¶ 177.)

Likewise, the recital in Claim 1 of the ’559 Patent of “a mobile device associated with an image capture device” does not persuasively support PNC’s construction because a mobile device could be “associated” with an image capture device without necessarily being structurally separate. The opinion of PNC’s expert in this regard is unpersuasive. (*See* Dkt. No. 212-1, July 21, 2021 Bovik Decl., at ¶ 174.)

Finally, to the extent, if any, that the disclosure that “image capture device 300 may have mass storage” suggests that an image capture device can be separate from a computing device (*see* ’605 Patent at 6:39–56 & Fig. 3), this is a specific feature of a particular disclosed embodiment that should not be imported into the claims. *See Phillips*, 415 F.3d at 1303; *see also* ’432 Patent at 4:61–66 (“For example, modern scanner users may be familiar with the TWAIN software often used to control image capture from a computer 111.”).

The Court therefore hereby expressly rejects PNC’s proposed constructions, adopts the *Wells Fargo II* constructions for “mobile device” and “portable device,” and expressly rejects PNC’s proposed constructions for “digital camera” and “mobile device associated with an image capture device,” and no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed

meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes these disputed terms in the ’432 Patent, the ’559 Patent, the ’681 Patent, and the ’605 Patent as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
“mobile device”	“handheld computing device”
“digital camera”	Plain meaning
“mobile device associated with an image capture device”	Plain meaning (apart from the Court’s construction of “mobile device”)
“portable device”	“computing device capable of being easily moved manually”

2. “checking for errors”

“checking for errors” (’432 Patent, Claim 1; ’681 Patent, Claims 1, 28, 30)	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary.	“validating information in the check image”

(Dkt. No. 170, Ex. B, at 1 & 8; Dkt. No. 226, Ex. A, at 17.)

(a) The Parties’ Positions

USAA argues that whereas “[t]he specification provides numerous examples of checking for errors that confirm the term is being used in its ordinary sense,” “PNC’s proposed construction is unnecessary and would improperly exclude embodiments.” (Dkt. No. 197, at 10.)

PNC responds that “[a] customer provides the bank with a check image in the ‘submitting step,’ and ‘checking for errors’ thus refers to validating information in the check image before it is submitted,” and “[t]he patents’ specification also makes clear that ‘checking for errors’ involves validating information in the check image itself.” (Dkt. No. 212, at 7.) PNC also argues that “USAA’ implicit construction, which encompasses any ‘error’ from an internet connectivity error to an app that needs updating, . . . is unmoored from the specification.” (*Id.*, at 8.)

USAA replies that “PNC does not dispute that its construction would read out some embodiments, such as those in which ‘check identification data’ (for example, entered by the user) is used to identify duplicate deposit errors.” (Dkt. No. 215, at 3 (citing ’432 Patent at 10:29–36).)

At the November 10, 2021 hearing, USAA argued that Claim 30 of the ’681 Patent, for example, already recites image validation (in the “confirming . . .” limitation) separate from “checking for errors.” Also, the parties agreed that “checking for errors” does not refer to an Internet connection error, for example, but rather refers to an error related to the check image.

(b) Analysis

Claim 1 of the '432 Patent, for example, recites (emphasis added):

1. A system comprising:

a customer's mobile device including a downloaded app, the downloaded app provided by a bank to control check deposit by causing the customer's mobile device to perform:

instructing the customer to have a digital camera take a photo of a check;

giving an instruction to assist the customer in placing the digital camera at a proper distance away from the check for taking the photo;

presenting the photo of the check to the customer after the photo is taken with the digital camera;

using a wireless network, transmitting a copy of the photo from the customer's mobile device and submitting the check for mobile check deposit in the bank after presenting the photo of the check to the customer; and

a bank computer programmed to update a balance of an account to reflect an amount of the check submitted for mobile check deposit by the customer's mobile device;

wherein the downloaded app causes the customer's mobile device to perform additional steps including:

confirming that the mobile check deposit can go forward after optical character recognition is performed on the check in the photo; and

checking for errors before the submitting step.

Figure 3 of the '432 Patent discloses, for example, "Validate Routing Number Information," "Determine Whether Check Was Previously Deposited," "Perform OCR on Amount Location," and "Compare OCR-Determined Amount with Customer-Entered Amount." '432 Patent at Fig. 3; *see id.* at 10:13–65.

PNC's proposal of "validating" would tend to confuse rather than clarify the scope of the claims and might be inconsistent with disclosures regarding merely comparing. *See id.* Also, PNC does not persuasively justify limiting the generic term "checking for errors" so as to require checking "information in the check image" rather than some other aspect of the recited functionality. The additional disclosures in the specification cited by PNC relate to specific

features of particular disclosed embodiments that should not be imported into the claims. *See* '432 Patent at 9:47–51, 9:53–54, 9:62–67 & 10:10:5–7; *see also Phillips*, 415 F.3d at 1323.

Finally, at the November 10, 2021 hearing, the parties agreed that “checking for errors” does not refer to an Internet connection error, for example, but rather refers to an error related to the check image.

With that understanding, the Court therefore hereby expressly rejects PNC’s proposed construction. In particular, the Court expressly rejects PNC’s proposal of “in the check image” because the “checking” could involve user input that is related to the check image, such as user input of a dollar amount corresponding to the check. At the November 10, 2021 hearing, PNC argued that user-entered information would not meet the claim limitations because the claims require optical character recognition. Reading the claims as a whole, however, the limitations regarding optical character recognition do not restrict “checking for errors” to using only optical character recognition. *See, e.g.,* '432 Patent, Cl. 1 (reproduced above).

No further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**checking for errors**” to have its **plain meaning**.

3. “instructing,” “giving an instruction,” “assisting the customer with lighting,” “displaying a graphical illustration,” “control[ing] display of instructions,” “displaying,” “assisting the user,” “assist[ing] the customer,” and “giving an instruction”

<p>“instructing” / “giving an instruction” / “assisting the customer with lighting” / “displaying a graphical illustration” / “control[ing] display of instructions” / “displaying” / “assisting the user” / “assist[ing] the customer” / “giving an instruction” (’432 Patent, Claims 1, 6, 14, 21, 23; ’559 Patent, Claims 4–8, 13–17; ’681 Patent, Claims 1, 12, 29, 30; ’605 Patent, Claims 1, 12, 29)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary. Terms have patentable weight.	Terms lack patentable weight.

(Dkt. No. 170, Ex. B, at 1, 2, 7 & 9; Dkt. No. 226, Ex. A, at 19.)

In e-mail correspondence to the Court on November 9, 2021, PNC withdrew its arguments as to these disputed terms.

The Court therefore hereby construes **“instructing,” “giving an instruction,” “assisting the customer with lighting,” “displaying a graphical illustration,” “control[ing] display of instructions,” “displaying,” “assisting the user,” “assist[ing] the customer,” and “giving an instruction”** to have their plain meaning.

4. “bank computer” and “third-party vendor computer”

<p>“bank computer” “third-party vendor computer” (’432 Patent, Claim 1; ’681 Patent, Claim 27; ’605 Patent, Claim 26)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary. Term has patentable weight.	Term lacks patentable weight.

(Dkt. No. 170, Ex. B, at 1, 8 & 10; Dkt. No. 226, Ex. A, at 25.)

In e-mail correspondence to the Court on November 9, 2021, PNC withdrew its arguments as to these disputed terms.

The Court therefore hereby construes “**bank computer**” and “**third-party vendor computer**” to have their **plain meaning**.

5. “a computing device for processing a remote deposit of a check, the computing device comprising” and “a method for controlling a computing device to process a remote deposit of a check, the method comprising”

<p>“a computing device for processing a remote deposit of a check, the computing device comprising” / “a method for controlling a computing device to process a remote deposit of a check, the method comprising” (’559 Patent, Claims 1, 10)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>Preambles are limiting.</p>	<p>The references to “computing device” are limiting; otherwise not limiting.</p>

(Dkt. No. 170, Ex. B, at 2; Dkt. No. 226, Ex. A, at 26.)

(a) The Parties’ Positions

USAA cites the analysis set forth in *Wells Fargo II*, and USAA argues that “the preambles here are more than simply a statement of intended purpose or goal of the invention but rather are essential to properly understanding the bodies of the claims and are thus limiting.” (Dkt. No. 197, at 13 n.1; *see id.* at 13–14 (discussing *Wells Fargo II* at 9–20).)

PNC responds:

[T]he phrases “for processing a remote deposit of a check” / “to process a remote deposit of a check” (’559 patent, cl. 1 & 10) . . . are properly interpreted as stating an intended purpose of the claims. Other elements in the bodies of these claims lead to the result that they are infringed only when the check images satisfy certain conditions or that the deposit moves forward in certain respects. *See, e.g.*, ’559 patent, cl. 1 (“determine the digital image is suitable for creating a substitute check and sufficient to go forward with the deposit”; “accepting the digital image for check deposit in place of the check depicted in the digital image”)

(Dkt. No. 212, at 22 n.5.)

USAA replies that *Wells Fargo II* rejected the same arguments that PNC is presenting here.

(Dkt. No. 215, at 4.)

(b) Analysis

In general, a preamble limits the invention if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim. *Pitney Bowes[, Inc. v. Hewlett-Packard Co.]*, 182 F.3d [1298,] 1305 [(Fed. Cir. 1999)]. Conversely, a preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997).

Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002).

In general, there is a “presumption against reading a statement of purpose in the preamble as a claim limitation.” *Marrin v. Griffin*, 599 F.3d 1290, 1294–95 (Fed. Cir. 2010); *see Allen Eng’g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) (“Generally, the preamble does not limit the claims.”); *see also Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 769–71 (Fed. Cir. 2018) (in preamble reciting “[a] computer network for providing an information delivery service for a plurality of participants,” finding “information delivery service” to be non-limiting because it “merely describe[s] intended uses for what is otherwise a structurally complete invention”). Thus, the claim “defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Catalina Mktg.*, 289 F.3d at 808 (citing *Rowe*, 112 F.3d at 478).

A preamble may be limiting, however, if it states a “fundamental characteristic of the claimed invention,” “serves to focus the reader on the invention that is being claimed,” or “states the framework of the invention.” *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1343 (Fed. Cir. 2006). A preamble may be limiting if it sets forth a feature “underscored as

important by the specification.” *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1358 (Fed. Cir. 2012) (quoting *Catalina*, 289 F.3d at 808). Additionally, in some cases, “[w]hen a patent . . . describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.” *Forest Labs., LLC v. Sigmapharm Labs., LLC*, 918 F.3d 928, 933 (Fed. Cir. 2019) (quoting *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007)).

Further, “[w]hen limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003); see *C.W. Zumbiel Co. v. Kappos*, 702 F.3d 1371, 1385 (Fed. Cir. 2012) (finding preambles limiting because “‘containers’ as recited in the claim body depend on ‘a plurality of containers’ in the preamble as an antecedent basis”).

Claim 1 of the ’559 Patent, for example, recites (emphasis added):

1. A computing device for processing *a remote deposit of a check*, the computing device comprising:
 - first processing circuitry;
 - a first memory having stored thereon executable instructions that, when executed by the first processing circuitry, cause the first processing circuitry to perform first operations including:
 - receive a digital image depicting at least portions of the check submitted by a user for *the remote deposit of the check*, the digital image transmitted using a mobile device associated with an image capture device, the digital image being captured by the image capture device;
 - detect an image format of the digital image;
 - determine the digital image is stored in a first image format;
 - convert the digital image into a second image format, wherein an image quality of the first image format is greater than an image quality of the second image format;
 - apply optical character recognition to the digital image;
 - determine an amount for *the remote deposit of the check* based on the optical character recognition applied to the digital image;
 - compare the determined amount against a customer-entered amount;

- optically read a magnetic ink character recognition (MICR) line depicted in the digital image;
- determine a routing number from the optically read MICR line;
- perform duplicate check detection on the check depicted in the digital image based at least in part on information obtained via the optical character recognition applied to the digital image; and
- determine the digital image is suitable for creating a substitute check and sufficient to go forward with *the deposit*;

second processing circuitry; and

a second memory having stored thereon executable instructions that, when executed by the second processing circuitry, cause the second processing circuitry to perform second operations including:

- accepting the digital image for check deposit in place of the check depicted in the digital image.

The preamble recital of “a remote deposit of a check” thus provides antecedent basis for “the remote deposit of the check” and “the deposit.” Claim 10 of the ’559 Patent is similar in this regard.

The preambles thus set forth a necessary limitation. *See, e.g., Eaton*, 323 F.3d at 1339 (quoted above). Further, this antecedent basis is intertwined with the remainder of the preamble, which refers to “processing” and, in turn, a “computing device.” The entire preamble is therefore limiting. *See Proveris Scientific Corp. v. Innovasystems, Inc.*, 739 F.3d 1367, 1373 (Fed. Cir. 2014) (“The phrase ‘the image data’ clearly derives antecedent basis from the ‘image data’ that is defined in greater detail in the preamble as being ‘representative of at least one sequential set of images of a spray plume.’”).

Moreover, *Wells Fargo II* found as follows regarding claims in patents that have the same specification as the patent here at issue:

Absent the preamble, the body is ostensibly directed to all types of check-image processing, such as for archiving or reporting. But the focus of the inventions of the patents is facilitating the deposit process by submission of check images. The inventions are not directed to general improvements in check-image processing. The claim bodies here are properly understood only with reference [to] the tethering language found in the preambles.

Wells Fargo II at 17–18; *see id.* at 15 (“Here, the check-deposit aspect of the preambles is more than simply a statement of intended use, they reflect an important aspect of the described invention and they are essential to properly understanding limitations in the claim bodies.”); *see also id.* at 18. The same conclusion is appropriate here as to the ’559 Patent.

In sum, this is a case in which the patentee “use[d] both the preamble and the body to define the subject matter of the claimed invention.” *Bell Commc ’ns Research, Inc. v. Vitalink Commc ’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995).

Based on the Court’s analysis in the present case as well as considering the analysis in *Wells Fargo II* (cited above), the Court hereby finds that **the entire preambles of Claims 1 and 10 of the ’559 Patent are limiting.**

6. “first processing circuitry” / “second processing circuitry”

“first processing circuitry” (’559 Patent, Claims 1, 10)	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary.	“first processor”
“second processing circuitry” (’559 Patent, Claims 1, 10)	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary.	“processor different from the first processor”

(Dkt. No. 170, Ex. B at 2; Dkt. No. 226, Ex. A, at 31 & 33.)

(a) The Parties' Positions

USAA argues that “PNC’s attempt to rewrite ‘processing circuitry’ as ‘processor’ is inappropriate,” and “there is no requirement in the specification that th[e] single server have multiple processors.” (Dkt. No. 197, at 16.) Instead, USAA argues, “[t]he purpose of the ‘circuitry’ language is to make clear that the recited functions are performed by circuitry in the system, not humans.” (*Id.*) USAA further argues: “Nothing in the patent requires that the first and second processing circuitry be completely distinct. Rather, the claims merely require that they perform the recited functions.” (*Id.*)

PNC responds that “the claim language is not merely functional; it recites two different *structures*,” and “USAA’s proposed construction gives no meaning to the words ‘first’ and ‘second’—and could allow a single processing circuitry that performs the functions that the claims require of each processing circuitry.” (Dkt. No. 212, at 11.) PNC also argues that the specification as well as extrinsic evidence demonstrate that “processing circuitry” is a processor. (*Id.*, at 11–12.)

USAA replies: “The specification never states that the first and second processing circuitry must be different. To the contrary, the specification provides an exemplary embodiment where the same server can perform functions of both circuitries.” (Dkt. No. 215, at 4 (citing ’559 Patent at 9:16–22 & Fig. 3).)

(b) Analysis

PNC cites authority that the use of “first” and “second” is “a common patent-law convention to distinguish between repeated instances of an element.” *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003); *see Mobile Telecoms. Techs., LLC*

v. Leap Wireless Int'l, Inc., No. 2:13-CV-885-JRG-RSP, 2015 WL 2250056, at *7 (E.D. Tex. May 13, 2015) (“construction is appropriate to clarify” that they are “not identical”).

PNC does not persuasively show, however, that the “first processing circuitry” and “second processing circuitry” must each be a distinct processor. Although the “first” and “second” processing circuitry must be distinct from one another, they need not be separate structures. *See Powell v. Home Depot USA, Inc.*, 663 F.3d 1221, 1231–32 (Fed. Cir. 2011); *see also Applied Med. Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006) (“the use of two terms in a claim requires that they connote different *meanings*, not that they necessarily refer to two different *structures*”) (citation omitted). That is, although the “first” and “second” processing circuitry cannot be identical, there may be overlap between them, and they need not be physically separate from one another. *Cf. Linear Tech. Corp. v. Int'l Trade Comm'n*, 566 F.3d 1049, 1055 (Fed. Cir. 2009) (“We agree with the Commission’s construction of ‘second circuit’ and ‘third circuit,’ defining the terms broadly to not require entirely separate and distinct circuits.”).

Likewise, as to PNC’s argument that “processing circuitry” must be a “processor,” this is a specific feature of particular disclosed embodiments that should not be imported into the claims. *See Phillips*, 415 F.3d at 1323; *see also* ’559 Patent at 10:21–22 (“Determining whether a check is a duplicate can be processor- and memory-intensive . . .”), 13:58–59 (“the computer will generally include a processor, a storage medium readable by the processor . . .”) & 14:9–13 (“When implemented on a general-purpose processor, the program code combines with the processor to provide a unique apparatus that operates to perform the processing of the disclosed embodiments.”). The opinions of PNC’s expert do not compel otherwise. (*See* Dkt. No. 212-1, July 21, 2021 Bovik Decl., at ¶ 186.)

The Court therefore hereby expressly rejects PNC’s proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**first processing circuitry**” and “**second processing circuitry**” to have their **plain meaning**.

7. “suitable for creating a substitute check”

“suitable for creating a substitute check” (’559 Patent, Claims 1, 3, 10, 12)	
USAA’s Proposed Construction	PNC’s Proposed Construction
“in a form sufficient to allow money to be credited to an account in compliance with all legal requirements”	“suitable for creating a paper copy of the original check that can be used by a bank in place of the original check”

(Dkt. No. 170, Ex. B, at 2; Dkt. No. 226, Ex. A, at 35.)

(a) The Parties’ Positions

USAA argues: “PNC’s proposal is inconsistent with the regulatory meaning and banking industry practice because it implies that a paper version is necessary and excludes exclusively electronic copies of the check. The specification makes clear that ‘substitute check’ here refers to ‘electronic images of checks.’” (Dkt. No. 197, at 17–18 (citation omitted).)

PNC responds that “[a] POSITA would have interpreted this term according to its express statutory definition [under Check 21, *see* ’559 Patent at 11:57–61], confirmed by the specification.” (Dkt. No. 212, at 12.)

USAA replies that “[t]he claims and specification of the ’559 Patent are clearly referring to electronic images, not paper checks.” (Dkt. No. 215, at 5 (citations omitted).) USAA also

argues that “the claims do not require that the digital image *be* a substitute check, only that it ‘is suitable for creating a substitute check.’” (*Id.* (quoting ’559 Patent, Cl. 1).)

(b) Analysis

Claim 1 of the ’559 Patent, for example, recites in relevant part (emphasis added):

1. A computing device for processing a remote deposit of a check, the computing device comprising:

 first processing circuitry;

 a first memory having stored thereon executable instructions that, when executed by the first processing circuitry, cause the first processing circuitry to perform first operations including:

 receive a digital image depicting at least portions of the check submitted by a user for the remote deposit of the check, the digital image transmitted using a mobile device associated with an image capture device, the digital image being captured by the image capture device;

 determine the digital image is *suitable for creating a substitute check* and sufficient to go forward with the deposit;

Although the cited “Check 21” statute defines “substitute check” as a “paper reproduction of the original check” (12 U.S.C. § 5002(16)), the specification refers to “substitute checks” as being “electronic images of checks”:

A substitute check is typically a paper reproduction of an original check and may be the legal equivalent of the original check. Substitute checks were authorized under The Check Clearing for the 21st Century Act, commonly known as Check 21. The Act was enacted to facilitate the check clearing process by allowing banks to transmit *electronic images of checks (e.g., substitute checks)* to other banks rather than physically sending the original paper checks.

’559 Patent at 11:57–64 (emphasis added). PNC thus does not persuasively support its proposal of requiring an ability to create a paper check.

As to USAA’s proposal of referring to “all legal requirements,” however, the specification explains that banks can have agreements to accept electronic images that do not meet the requirements to be substitute checks. *See id.* at 11:65–12:5. The opinions of USAA’s expert on

this point, to the extent they are read as encompassing any such legally permissible electronic image that does not meet the requirements to be a substitute check, are unpersuasive. (*See* Dkt. No. 197, Ex. 14, June 1, 2021 Mott Decl., at ¶ 39 (“A ‘substitute check’ has a particular meaning in the context of check deposit. Specifically, U.S. federal banking regulations provide that a substitute check is the legal equivalent of an original check, provided that certain legal requirements have been satisfied. The rules regarding substitute checks are set out in the Federal Reserve Board’s regulations implementing the Check 21 Act.”); *see also id.* ¶¶ 39–42.)

The Court therefore hereby construes **“suitable for creating a substitute check”** to mean **“in a form that is sufficient for creating a reproduction of an original check that can be processed in place of the original.”**

8. **“an image capture and processing system for use with optical character recognition (OCR)” / “an image capture and processing system for use with a digital camera” and “a system for allowing a customer to deposit a check using the customer’s own mobile device with a digital camera” / “a system for allowing a customer to deposit a check using a customer’s own handheld mobile device with a digital camera”**

<p>“an image capture and processing system for use with optical character recognition (OCR)” / “an image capture and processing system for use with a digital camera” (’681 Patent, Claim 1; ’605 Patent, Claim 1)</p> <p>“a system for allowing a customer to deposit a check using the customer’s own mobile device with a digital camera” / “a system for allowing a customer to deposit a check using a customer’s own handheld mobile device with a digital camera” (’681 Patent, Claim 12; ’605 Patent, Claim 12)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
Preamble is limiting.	Preamble is not limiting.

(Dkt. No. 170, Ex. B, at 7 & 9; Dkt. No. 226, Ex. A, at 37.)

(a) The Parties' Positions

USAA argues that “[t]he Court’s prior holding [in *Wells Fargo II*] that the preambles [of Claim 12 of the ’681 Patent and Claim 12 of the ’605 Patent] are limiting should govern in this case.” (Dkt. No. 197, at 18.) As to Claim 1 of the ’681 Patent and Claim 1 of the ’605 Patent, USAA argues that “the Court should find those limiting as well because they are also necessary to understand the claims.” (*Id.*)

PNC responds that the phrase “for allowing a customer to deposit a check” is “properly interpreted as stating an intended purpose of the claims,” and “[o]ther elements in the bodies of these claims lead to the result that they are infringed only when the check images satisfy certain conditions or that the deposit moves forward in certain respects.” (Dkt. No. 212, at 22 n.5.)

(b) Analysis

PNC does not persuasively justify departing from the Court’s analysis in *Wells Fargo II* in which the parties there disputed whether Claim 12 of the ’681 Patent and Claim 12 of the ’605 Patent are limiting. *See Wells Fargo II* at 10–20.

Substantially the same analysis applies to Claim 1 of the ’681 Patent and Claim 1 of the ’605 Patent, as to which PNC presents no arguments in its responsive claim construction brief. For example, the preamble recital of “a digital camera” in Claim 1 of the ’605 Patent provides antecedent basis for the recitals of “the digital camera” in the body of the claim. *See, e.g., Eaton*, 323 F.3d at 1339.

The Court therefore hereby finds that **the entire preambles of Claims 1 and 12 of the ’681 Patent and Claims 1 and 12 of the ’605 Patent are limiting.**

9. “general purpose computer”

“general purpose computer” (’681 Patent, Claim 1; ’605 Patent, Claim 1)	
USAA’s Proposed Construction	PNC’s Proposed Construction
“computer that is not specialized for a particular purpose”	“a personal computer running a Windows operating system or a Macintosh brand computer running an Apple operating system, in a desktop or laptop configuration”

(Dkt. No. 170, Ex. B, at 7 & 9; Dkt. No. 226, Ex. A, at 44.)

(a) The Parties’ Positions

USAA proposes the *Wells Fargo II* construction of the same term. (Dkt. No. 197, at 19.)

USAA argues that the Court should reject PNC’s proposal to “limit this term by incorporating an exemplary description of ‘general purpose computer’ in the specification as an express definition.”

(*Id.*)

PNC responds that whereas PNC’s proposal “is supported by the patents’ specification,” the *Wells Fargo II* construction proposed here by USAA “had no occasion to address the particular claim construction dispute presented here” as to “the express definition for ‘general purpose computer’ in the patents’ specification.” (Dkt. No. 212, at 13–14.)

USAA replies that *Wells Fargo II* “expressly cited the identical language from the related ’227 Patent,” and “the language PNC cites is an ‘example system,’ and thus does not limit claim scope.” (Dkt. No. 215, at 5 (citing *Wells Fargo II* at 27–28; citing ’227 Patent at 4:16–25; citing ’681 Patent at 3:26–33).)

(b) Analysis

USAA proposes the *Wells Fargo II* construction. See *Wells Fargo II* at 26–28. This construction also finds support in a portion of the specification cited by USAA in the present case. See ’681 Patent at 3:41–45 (“The term ‘general purpose computer’ specifically excludes specialized equipment as may be purchased by a business or other commercial enterprise, for example, for the specialized purpose of high-speed, high-volume check deposits.”); see also ’605 Patent at 4:1–5 (same).

PNC argues that *Wells Fargo II* did not consider certain other disclosures in the specification, namely the disclosure that:

A general purpose computer 111 is generally a Personal Computer (PC) running one of the well-known WINDOWS® brand operating systems made by MICROSOFT® Corp., or a MACINTOSH® (Mac) brand computer, running any of the APPLE® operating systems. General purpose computers are ubiquitous today and the term should be well understood. A general purpose computer 111 may be in a desktop or laptop configuration, and generally has the ability to run any number of applications that are written for and compatible with the computer’s operating system.

’681 Patent at 3:31–41. PNC argues that this disclosure should be considered because “the specification necessarily informs the proper construction of the claims.” *Phillips*, 415 F.3d at 1316.

First, *Wells Fargo II* considered an identical disclosure in United States Patent No. 8,708,227 (“the ’227 Patent”). Compare ’681 Patent at 3:31–41 with ’227 Patent at 4:16–25; see *Wells Fargo II* at 26–28.

Second, this disclosure cited by PNC does not “*clearly set forth* a definition of the disputed claim term.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (emphasis added). Instead, the disclosure discusses “generally” and, moreover, does so with regard to “general purpose computer 111,” which is a particular element identified by a reference

numeral (not simply the term “general purpose computer”). *See* ’681 Patent at 3:26–31 (“example system in which the described embodiments may be employed”). This disclosure thus pertains to a particular disclosed embodiment, does not set forth a definition for the term “general purpose computer,” and should not be imported into the meaning of the term “general purpose computer” as used in the claims. *See Phillips*, 415 F.3d at 1323.

The Court therefore adopts the *Wells Fargo II* construction and accordingly hereby construes “**general purpose computer**” to mean “**computer that is not specialized for a particular purpose.**”

10. “submitting the check for [mobile check] deposit”

<p>“submitting the check for [mobile check] deposit” (’681 Patent, Claims 1, 12, 30; ’605 Patent, Claims 1, 12)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“submitting the check with the goal of having it be deposited”</p>

(Dkt. No. 170, Ex. B, at 8 & 10; Dkt. No. 226, Ex. A, at 46.)

(a) The Parties’ Positions

USAA argues that whereas PNC’s proposal “unnecessarily adds confusion by incorporating the concept of a ‘goal’ of the check being deposited,” “[t]he claim language requires that the mobile or portable device submit the check for deposit in the bank, which is straightforward and understandable without further construction.” (Dkt. No. 197, at 20.)

PNC responds that “[n]othing in that term requires that the submitted images actually be in a form sufficient to allow money to be credited to an account.” (Dkt. No. 212, at 22 n.5.)

USAA replies that “[a]dding reference to a ‘goal’ is unsupported and injects confusion by adding an amorphous intent requirement.” (Dkt. No. 215, at 6.)

(b) Analysis

PNC’s proposal of introducing a “goal” into the construction is unclear, lacks sufficient support in the intrinsic record, and would tend to confuse rather than clarify the scope of the claims.

The Court therefore hereby expressly rejects PNC’s proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**submitting the check for [mobile check] deposit**” to have its **plain meaning**.

11. “PDA”

<p>“PDA” (’605 Patent, Claims 5, 16)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“a handheld computer with specialized software for use as a personal organizer”</p>

(Dkt. No. 170, Ex. B, at 9.)

USAA submits in its reply claim construction brief that it “omits the terms ‘PDA’ and ‘deposit system’ because USAA did not elect those claims in its court-ordered claim narrowing.”

(Dkt. No. 215, at 1 n.1.)

Based on this representation by USAA that this term no longer appears in any asserted claim, the Court does not further address this term.

12. “a non-transitory computer-readable medium comprising computer-readable instructions] for depositing a check” / “[a system] for depositing a check”

<p>“a non-transitory computer-readable medium comprising computer-readable instructions] for depositing a check” / “[a system] for depositing a check” (’571 Patent, Claims 1, 9; ’779 Patent, Claims 1, 10)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
Preambles are limiting.	Preambles are not limiting.

(Dkt. No. 170, Ex. B, at 3 & 5; Dkt. No. 226, Ex. A, at 51.)

(a) The Parties’ Positions

USAA submits that “[b]oth this Court and the PTAB have already held that the preambles of the ’571 and ’779 Patents are limiting, as the preambles provide antecedent basis for ‘check’ and ‘mobile device’ limitations found in the bodies of the claims and ‘depositing a check’ provides important context for understanding the rest of the claims.” (Dkt. No. 197, at 21.)

PNC responds: “PNC does not dispute that the preamble language is limiting to the extent that it provides antecedent basis for ‘check.’ But the phrase ‘for depositing a check’ is properly interpreted as stating an intended purpose of the claims and cannot be read to include a requirement that the check images transmitted by the claimed software or system are actually in a form sufficient to allow money to be credited to an account.” (Dkt. No. 212, at 21.)

USAA replies that “[t]his Court also rejected the specific argument advanced by PNC that the claims do not require the check image to be ‘actually in a form sufficient to allow money to be credited to an account,’ explaining that ‘depositing a check is more than just providing it to the institution, it involves providing it in a form to enable actual crediting of funds to the deposit account.’” (Dkt. No. 215, at 6 (quoting *Wells Fargo I* at 16).)

(b) Analysis

Wells Fargo I found the preambles limiting. *See Wells Fargo I* at 9–18. The PTAB reached the same conclusion, finding that the preamble of Claim 1 of the '571 Patent “is limiting because it imposes a structural limitation on the claim in addition to specifying its intended use. * * * We also determine that the preamble provides an antecedent basis for the claim term ‘check.’” *Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00004, Paper 22, Decision, at 11 & 13 (P.T.A.B. May 15, 2019) (Dkt. No. 238, Ex. D).

PNC argues that the preambles are limiting only to the extent they provide antecedent basis for “check.”

As a general matter, there is a “presumption against reading a statement of purpose in the preamble as a claim limitation.” *Marrin*, 599 F.3d at 1294–95; *see Allen Eng’g*, 299 F.3d at 1346 (“Generally, the preamble does not limit the claims.”); *see also Acceleration Bay*, 908 F.3d at 769–71 (in preamble reciting “[a] computer network for providing an information delivery service for a plurality of participants,” finding “information delivery service” to be non-limiting because it “merely describe[s] intended uses for what is otherwise a structurally complete invention”). Thus, a claim could “define[] a structurally complete invention in the claim body and use[] the preamble only to state a purpose or intended use for the invention.” *Catalina Mktg.*, 289 F.3d at 808 (citing *Rowe*, 112 F.3d at 478).

Also, in some cases, “that [a] phrase in the preamble . . . provides a necessary structure for [the] claim . . . does not necessarily convert the entire preamble into a limitation, particularly one that only states the intended use of the invention.” *TomTom Inc. v. Adolph*, 790 F.3d 1315, 1323 (Fed. Cir. 2015); *see also id.* (“It was therefore error for the district court to use an antecedent basis rationale to justify converting this independent part of the preamble into a new claim limitation.”);

Georgetown Rail Equip. Co. v. Holland L.P., 867 F.3d 1229, 1234, 1236–38 (Fed. Cir. 2017) (preamble language “system for inspecting a railroad track bed, including the railroad track, to be mounted on a vehicle for movement along the railroad track” not limiting as to “to be mounted on a vehicle for movement along the railroad track,” even though “railroad track bed” provided antecedent basis for limitations in the body of the claim).

Claim 1 of the ’571 Patent, for example, recites (emphasis added):

1. A *non-transitory computer-readable medium comprising computer-readable instructions for depositing a check* that, when executed by a processor, cause the processor to:

monitor an image of *the check* in a field of view of a camera of a mobile device with respect to a monitoring criterion using an image monitoring and capture module of the mobile device;

capture the image of the check with the camera when the image of the check passes the monitoring criterion; and

provide the image of the check from the camera to a depository via a communication pathway between the mobile device and the depository.

As noted above, the parties agree that because the preamble provides antecedent basis for “the check,” the preamble is limiting in that regard.

On balance, the preamble recital of “a check” is intertwined with the larger phrase “for depositing a check,” such that the entirety of the preamble is limiting. *See Proveris*, 739 F.3d at 1373 (“The phrase ‘the image data’ clearly derives antecedent basis from the ‘image data’ that is defined in greater detail in the preamble as being ‘representative of at least one sequential set of images of a spray plume.’”).

A similar analysis applies to the other claims here at issue, namely Claim 9 of the ’571 Patent and Claims 1 and 10 of the ’779 Patent. The specification disclosure cited by PNC, regarding “increas[ing] the likelihood of capturing a digital image of the check 108 that may be readable and processed such that the check 108 can be cleared,” does not compel otherwise. *See*

'571 Patent at 3:54–58; *see id.* at 4:17–22 (“the number of nonconforming images of checks is reduced”); *see also* '779 Patent at 3:55–58.

The Court therefore hereby finds that **the entire preambles of Claims 1 and 9 of the '571 Patent and Claims 1 and 10 of the '779 Patent are limiting.**

13. “mobile device”

“mobile device” (’571 Patent, Claims 1, 2, 7, 8, 9, 10; ’779 Patent, Claims 1, 3, 5, 10)	
USAA’s Proposed Construction	PNC’s Proposed Construction
“computing device capable of being easily moved and that is controlled by a mobile operating system”	“handheld computing device”

(Dkt. No. 170, Ex. B, at 3 & 5; Dkt. No. 226, Ex. A, at 52.)

(a) The Parties’ Positions

USAA submits that “PNC provides no compelling reason to depart from the Court’s prior construction,” and “[t]he Court already considered and expressly rejected the specific construction PNC proposes.” (Dkt. No. 197, at 22.)

PNC responds that “[u]nlike the earlier-filed USAA patents-in-suit, in which the claim language and specification dictate a unique meaning for the term ‘mobile device,’ the ’571 and ’779 patents use that term’s plain and ordinary meaning: a handheld computing device.” (Dkt. No. 212, at 22.) PNC argues that although USAA proposes the *Wells Fargo I* construction for this term, “USAA’s construction is circular because it defines the mobile device in part based on the fact that it is ‘controlled by a mobile operating system,’” and “as USAA acknowledges, a mobile operating system is simply an ‘operating system that controls a mobile device.’” (*Id.*, at 23.)

USAA replies that PNC “identifies no reason why the jury would be unable to assess (as it did in *Wells Fargo I*) whether a particular accused device is a ‘computing device capable of being easily moved and that is controlled by a mobile operating system.’” (Dkt. No. 215, at 6.)

(b) Analysis

Wells Fargo I construed this term in the ’571 Patent and the ’779 Patent to mean “computing device capable of being easily moved and that is controlled by a mobile operating system.” *Wells Fargo I* at 18–22. The Court found:

While the “mobile device” of the patents is necessarily mobile (it is capable of being easily moved, like a mobile phone, PDA, or handheld), the patents clarify that it is distinct from other potentially movable systems, like camcorders, personal computers, and laptop computers. * * *

One distinction between the mobile device of the patents and the other potentially movable systems is the operating system: ‘A mobile operating system, also known as a mobile platform or a handheld operating system, is the operating system that controls a mobile device. . . . ’571 Patent col.11 ll.17–21; ’779 Patent col.7 l.65 – col.8 l.2.

Id. at 21–22.

Also, the Court expressly “decline[d] to limit ‘mobile device’ to ‘a mobile phone, personal digital assistant, or handheld computing device.’” *Id.* at 20.

PNC does not persuasively justify departing from the *Wells Fargo I* construction. PNC argues that “USAA’s construction is circular because it defines the mobile device in part based on the fact that it is ‘controlled by a mobile operating system,’” and “as USAA acknowledges, a mobile operating system is simply an ‘operating system that controls a mobile device.’” (Dkt. No. 212, at 23 (citing Dkt. No. 197, at 22).) In general, circularity in claim constructions is disfavored. *See ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1086, 1090 (Fed. Cir. 2003) (rejecting district court construction of the term “Internet *address*” as meaning “a particular host on the Internet,

specified by a *uniform resource locator* that is unique to that host” because the district court construed “*uniform resource locator*” to mean “the complete *address* of a site on the Internet specifying both a protocol type and a resource location”) (emphasis added). Here, however, the alleged circularity does not stem from any pair of actual constructions and, moreover, the *Wells Fargo I* construction does not define “mobile device” purely in terms of a mobile operating system but rather also as a “computing device capable of being easily moved.” *Wells Fargo I* at 22.

The Court therefore hereby construes “**mobile device**” (in the ’571 Patent and the ’779 Patent) to mean “**computing device capable of being easily moved and that is controlled by a mobile operating system.**”

14. “passes the monitoring criterion”

<p>“passes the monitoring criterion” (’571 Patent, Claims 1, 6, 9, 10)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>“determining that the quality of the monitored image feature is within acceptable thresholds so that check data can be electronically obtained from the image without error during electronic processing and clearing”</p>	<p>No further construction necessary.</p>

(Dkt. No. 170, Ex. B, at 3; Dkt. No. 226, Ex. A, at 54.)

(a) The Parties’ Positions

USAA argues that “PNC provides no compelling reason to depart from the PTAB’s construction.” (Dkt. No. 197, at 24 (*see id.* at 22–24).)

PNC responds that this term “means that the criterion being monitored, such as brightness or alignment, is satisfied,” which PNC argues the jury will understand without any construction. (Dkt. No. 212, at 23.) PNC also argues that “[t]he claim language requires only that a check image

pass a *single* monitoring criterion, such as an image brightness or skewing,” and “[s]atisfying *one* criterion cannot *ensure* that the check data can be electronically obtained without error as USAA proposes.” (*Id.* (citations omitted).) Finally, PNC argues that although USAA’s proposed construction was previously adopted by the PTAB, “[t]hat construction is, of course, not binding on this Court,” and “[t]he PTAB also construed the term *sua sponte* and without the benefit of the record evidence set forth above.” (*Id.*, at 24 (citation omitted).)

USAA replies that “PNC’s expert admits he has no background on the technical requirements for depositing images of checks and did not consider them,” and “PNC’s expert ignores the specification’s teaching that ‘monitoring’ serves ‘to capture an image of the check that may be processed properly, e.g., to have the data from the check obtained without error from the image, so that the check can be cleared.’” (Dkt. No. 215, at 7 (quoting ’571 Patent at 15:43–49).)

(b) Analysis

Claim 1 of the ’571 Patent, for example, recites (emphasis added):

1. A non-transitory computer-readable medium comprising computer-readable instructions for depositing a check that, when executed by a processor, cause the processor to:
 - monitor an image of the check in a field of view of a camera of a mobile device with respect to a monitoring criterion using an image monitoring and capture module of the mobile device;
 - capture the image of the check with the camera when the image of the check *passes the monitoring criterion*; and
 - provide the image of the check from the camera to a depository via a communication pathway between the mobile device and the depository.

This use of the word “criterion,” singular, means that the disputed term could refer to a single criterion. The specification discloses:

The monitoring criteria may be based on one or more of light contrast on the image, light brightness of the image, positioning of the image, dimensions, tolerances, character spacing, skewing, warping, corner detection, and MICR (magnetic ink character recognition) line detection, as described further herein.

'571 Patent at 4:3–8.

The specification also discloses that “[a]n application may monitor whether the check 108 is sufficiently within the frame of the camera and has a high enough *quality* for subsequent processing.” ’571 Patent at 3:61–64 (emphasis added). The specification further states that “[b]y ensuring that the image of the check passes monitoring *criteria* during preimage capture monitoring, the number of nonconforming images of checks is reduced during presentment.” *Id.* at 4:17–22 (emphasis added). This disclosure regarding using “criteria,” plural, thus differs from the language of the disputed term itself, which refers to a “criterion,” singular.

The PTAB construed this disputed term to mean “determining that the quality of the monitored image feature is within acceptable thresholds so that check data can be electronically obtained from the image without error during electronic processing and clearing.” *Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00004, Paper 22, Decision, at 17 (P.T.A.B. May 15, 2019) (Dkt. No. 238, Ex. D).

USAA cites authority that “IPR proceedings . . . are part of the prosecution history and are relevant to claim construction.” *Bio-Rad Labs., Inc. v. 10X Genomics, Inc.*, 495 F. Supp. 3d 563, 581 (D. Mass. 2020).

At the November 10, 2021 hearing, the parties disagreed about whether the PTAB construed this term *sua sponte* or received arguments from the parties. Regardless, however, USAA’s own expert in the present case acknowledged during deposition that if brightness, for example, were the only monitoring criterion, then there is a “good chance” that the check image “couldn’t be processed” by a bank. (See Dkt. No. 212, Ex. V, June 29, 2021 Mott dep. at 174:8–15 (“Q . . . if you were just checking for brightness, there’s a good chance that when the check image arrived at the bank, it couldn’t be processed or deposited, fair? A I think generally, that’s

true. The brightness is a relatively minor factor in the various criteria that constitute a successful image capture for a successful deposit.”.)

Because the PTAB construction refers to “quality” in general rather than a particular “criterion” as set forth in the disputed term, the PTAB’s construction is unpersuasive. *See Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00004, Paper 22, Decision, at 17 (P.T.A.B. May 15, 2019) (Dkt. No. 238, Ex. D).

The additional disclosures cited by the PTAB do not compel otherwise. The PTAB cited these disclosures as showing that “[t]he ’571 patent specification repeatedly discloses that ‘passes the monitoring criteria’ means determining that the check can be properly processed and cleared.” *Id.*, at 15 (Dkt. No. 238, Ex. D); *see id.*, at 15–16 (citing ’571 Patent at 7:52–57, 8:45–49, 10:6–13, 12:9–14, 13:38–40 & 15:43–49). For example, the PTAB cited the following disclosure:

In an implementation, corner detection itself may be a monitoring criterion, such that if corner detection of the check 108 in the image 230 is achieved, then it may be concluded that the image 230 may be properly processed and cleared by a depository (i.e., the image 230 passes the monitoring criteria).

’571 Patent at 7:52–57.

Upon review, these disclosures do not persuasively support the PTAB’s conclusion. Instead, as discussed above, the specification explains that using monitoring criteria does not necessarily mean that a check can be processed and cleared without error but rather that “the number of nonconforming images of checks is *reduced* during presentment.” *Id.* at 4:17–22 (emphasis added); *see id.* at 3:54–58 (“the image is monitored for compliance with one or more monitoring criteria”) & 4:61–5:6.

The Court therefore hereby expressly rejects USAA’s proposed construction. Instead, the disputed term refers to determining that a particular monitored criterion is within some

predetermined range. *See, e.g.*, '571 Patent at 8:55–67 (“certain range corresponding to valid spacing between number in a MICR line”), 9:1–24 & 10:6–22 (“predetermined values or levels”).

The Court accordingly hereby construes **“passes the monitoring criterion”** to mean **“determining that a particular monitored criterion is within a predetermined range.”**

15. (a) “capture the image of the check [with / using] the camera” / “capture the image of the check” and (b) “when the image of the check [in the field of view] passes the monitoring criterion”

<p>“capture the image of the check [with / using] the camera” “capture the image of the check” ('571 Patent, Claims 1, 9; '779 Patent, Claims 1, 10)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
No further construction necessary.	“record in memory the light then entering the camera as a digital image of the check”
<p>“when the image of the check [in the field of view] passes the monitoring criterion” ('571 Patent, Claims 1, 6, 9, 10)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
“at or after the moment the image of the check [in the field of view] passes the monitoring criterion”	“at or after the moment the image of the check [in the field of view] passes the monitoring criterion” field of view: “the part of the world that is visible through the camera”

(Dkt. No. 170, Ex. B, at 3, 4 & 5; Dkt. No. 226, Ex. A, at 55 & 56–57.)

(a) The Parties’ Positions

USAA argues that the Court should reject PNC’s proposals, which would “re-write the [*Wells Fargo I*] claim construction in order to exclude preferred embodiments in the specification from the scope of the claims.” (Dkt. No. 197, at 24.) USAA urges, for example, that “PNC’s

construction is inconsistent with how a POSA would understand ‘capture’ and conflates the digital image sensor with the ‘camera,’ which includes the image sensor as well as camera optics and processing functionality.” (*Id.*, at 27 (citation omitted).) Finally, USAA argues: “The prosecution history [cited by PNC] says nothing about the claim construction question at issue here; namely, whether the claims encompass a system that obtains temporary preview images (such as from a video camera), analyzes them, and then takes additional steps (e.g., the encoding of a JPEG with metadata for transmission to the bank and permanent storage) to capture an image that passes the monitoring criteria, or whether (as PNC contends) the system has already ‘captured’ the image when it obtains a temporary preview image for analysis.” (*Id.*, at 29.)

PNC responds that “PNC’s construction tracks th[e] plain and ordinary meaning and is supported by the intrinsic evidence and the testimony of both parties’ experts.” (Dkt. No. 212, at 24.) PNC discusses the claim language and also argues that “[t]he specification confirms that ‘capture’ has its ordinary meaning of ‘take a picture.’” (*Id.*, at 24–27.) PNC also argues that “USAA’s construction encompasses what USAA sought to distinguish during prosecution.” (*Id.*, at 29.) Further, PNC argues that “the specification does not redefine the ordinary meaning of ‘capture’ through its use of ‘obtain.’” (*Id.*, at 31.)

USAA replies that “PNC’s construction is irreconcilable with the specification and claims,” and “[e]ach embodiment that PNC seeks to exclude is described explicitly in the specification.” (Dkt. No. 215, at 8 (citations omitted).) USAA also urges that PNC “grossly oversimplifies what a camera is,” USAA arguing that a “camera” includes both hardware and software and that “the patent distinguishes between temporary collection of images for monitoring and ultimate capture of the image of a check in a digital image storage format such as JPEG.” (*Id.* (citing ’571 Patent at 11:61–66 & 15:54–60).) USAA also submits that “[m]ultiple frames may

be monitored over time (as frames are obtained, analyzed, and discarded when they fail to satisfy the criteria), but each individual frame is a still image that is obtained, analyzed, and (if criteria are satisfied) captured.” (Dkt. No. 215, at 9.)

At the November 10, 2021 hearing, USAA reiterated that what can be “captured” is a still image or an image from a video stream. PNC argued that because the claims recite that “capturing” uses a camera, capturing must use the light that is entering the camera at the time of capture.

(b) Analysis

As to the term “when the image of the check [in the field of view] passes the monitoring criterion,” the parties agree that this term should be construed to mean “at or after the moment the image of the check [in the field of view] passes the monitoring criterion.” This comports with the Court’s analysis and constructions in *Wells Fargo I*. See *Wells Fargo I* at 35–36; see also *id.* at 28–36.

As to PNC’s proposed construction for the constituent term “field of view,” at the November 10, 2021 hearing the parties expressed a mutual understanding that the specification explains the meaning of “field of view,” such as set forth in the following disclosure:

The *field of view* is that part of the world that is visible through the camera at a particular position and orientation in space; objects outside the field of view when the image is captured are not recorded in the image.

’571 Patent at 3:66–4:3 (emphasis added). In light of the parties’ apparent mutual understanding, the Court does not construe the constituent term “field of view.” (See also Dkt. No. 212, Ex. V, June 29, 2021 Mott dep. at 160:1–161:7.)

As to the term “capture the image of the check,” USAA argues that this term encompasses creation of a JPEG after an image is obtained and analyzed, and “the same image can be monitored

in the field of view for satisfaction of the monitoring criteria and then captured.” (Dkt. No. 197, at 25.)

PNC argues that USAA’s proposal of encompassing merely compressing an image file to create another image file would fail to give effect to the phrase “[with/using] the camera” in these disputed terms. (Dkt. No. 212, at 25.)

As a threshold matter, the deposition testimony of PNC’s expert cited by USAA, upon review, does not significantly affect the Court’s analysis. (*See* Dkt. No. 197, Ex. 12, June 23, 2021 Bovik dep. at 95:2–9, 137:11–17 & 147:16–23.)

Turning to the intrinsic evidence, the claim language supports USAA’s interpretation. That is, capturing a still frame from a monitored stream of images (such as from a video) may be sufficient. For example, Claim 9 of the ’571 Patent recites computer-readable instructions to “monitor *an image of the check* in a field of view of a camera” and to “capture *the image of the check* using the camera when the image of the check in the field of view passes the monitoring criterion.” The patentee’s use of the definite article when referring to “the image of the check” demonstrates that what is “captured” can be the same image that was monitored. *See, e.g., Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 781–82 (Fed. Cir. 2010). This also comports with dependent Claims 10 and 11 of the ’571 Patent, which recite that after “*the image of the check in the field of view*” passes the monitoring criterion, the user is instructed to “capture *the image of the check*.”

The specification reinforces this understanding that the same image can be monitored in the field of view for satisfaction of the monitoring criteria and then captured, and this can occur as a software function:

The feedback may comprise instructions or guidance for the user to follow to obtain an image of the check in the field of view of the camera that will pass the monitoring

criteria. Processing may continue at 830 with the image that is currently in the field of view of the camera (after the user has received and acted on the feedback) being monitored with respect to the monitoring criteria.

When the image in the field of view passes the monitoring criteria as determined at 830, *the image* in the field of view may be captured by the camera at 850. This may be accomplished through *the software object accessing a camera* associated with the mobile device (e.g., either comprised within the mobile device or separate from the mobile device).

'571 Patent at 15:54–66 (emphasis added); *see id.* at 17:37–65 & 18:6–12 (“It is contemplated that processing such as grayscale conversion, image cropping, image compression, edge and/or corner detection, etc. may be implemented in the method 900. Such operations may be performed on one or more digital images created by the camera and may be performed on the image(s) by the mobile device and/or by the institution . . .”).

The specification also discloses:

In an implementation, *prior to* an image in the field of view of the camera 207 *being captured* by the camera 207, the image may be *monitored* with respect to monitoring criteria, e.g., using a software application running on the mobile device 106. Feedback based on the monitoring of the image may be provided to the user 102 to assist the user 102 in *positioning the check 108 so that the image of the check 108 may be captured . . .*

'571 Patent at 6:13–15 (emphasis added). Nothing in this disclosure is inconsistent with “capturing” a monitored frame that meets the monitoring criteria. Other disclosures discussed by the parties are similar in this regard. *See* '571 Patent at 5:45–52 (“a frame of the video may be obtained and monitored with respect to monitoring criteria”); *see also id.* at Fig. 8 (“Monitor image in field of view of camera with respect to monitoring criteria . . .”; “Provide feedback to user regarding image”; “Capture image when image passes monitoring criteria”).

Also of note, the specification discloses that the user may modify “the image” that is “being captured by the camera”:

In an implementation, instead of using the adjustment button 280, the user 102 may use a finger, a stylus, or any other input device to change the shape, aspect ratio, and/or the location of the alignment guide 263 in the field of view of the camera 207. Additionally or alternatively, *the user 102 may perform cropping on the image 260 prior to the image being captured by the camera 207.* Using any type of selection tool provided with the camera 207 or the mobile device 106, the user 102 may indicate the location of the edges 245 of the check image 247, for example. Such an indication may be used in the *subsequent capture and/or processing of the image of the check 108.*

'779 Patent at 7:10–21 (emphasis added). This disclosure is consistent with USAA's understanding that the "camera" is not merely a light sensor but rather includes some processing capability. This is also consistent with USAA's interpretation of "capture" as encompassing software processing functions rather than being limited to light entering a camera.

The opinions of PNC's expert to the contrary are unpersuasive. (*See* Dkt. No. 212-1, July 21, 2021 Bovik Decl., at ¶¶ 97–154.) Also, the opinion of USAA's expert is persuasive that a person of ordinary skill in the art would understand that capturing an image requires significant processing between the detection of light by the camera's image sensors and the output of a captured image of a check in a digital image storage format such as JPEG. (*See* Dkt. No. 197, Ex. 14, June 1, 2021 Mott Decl., at ¶ 48; *see also* '571 Patent at 11:61–66 ("the camera 207 captures the image in TIFF format . . . the camera 207 of the mobile device 106 may capture the image in JPEG format"); '779 Patent at 8:42–45 (same).) Testimony of USAA's expert cited by PNC, in which USAA's expert agreed that a sensor would be necessary to capture an image, does not compel otherwise. (*See* Dkt. No. 212, Ex. V, June 29, 2021 Mott dep. at 108:5–16.)

The prosecution history is also consistent with USAA's interpretation (or, at a minimum, is not inconsistent with USAA's interpretation). During prosecution of the '571 Patent, the examiner rejected claims based on the "Graham" reference (United States Patent No. 7,812,986). The patentee argued:

. . . Graham discloses that:

- (1) a capture device captures an image;
- (2) a quality assessment module makes a preliminary judgment about the content of the captured image; and
- (3) the quality assessment module causes the capture device to recapture the image at a higher resolution.

Thus, Graham discloses that a capture device captures an image either a) initially without any parameters or b) subsequently at a particular image resolution. At most, the cited passage of Graham discloses *different settings* by which a capture device captures an image. In other words, Graham is silent as to a timing condition of when to capture an image, let alone monitoring an image and capturing the image *when certain predetermined criteria are met*. Thus, the cited references merely disclose an automatic and continuous scanning of an image (Lors) and the capture and subsequent recapture of an image (Graham).

In contrast, claim 1 recites monitoring an image in a field of view of a camera and capturing *the image* when the monitored image passes a monitoring criterion. In other words, claim 1 recites a timing condition of when to capture an image of a check, the timing based on when a monitored image passes a monitoring criterion.

(Dkt. No. 212, Ex. K, Nov. 6, 2021 Appeal Brief at 7–8 (emphasis modified).)

USAA argues that the Court in *Wells Fargo I* found “no clear and unmistakable disclaimer” in this prosecution history, although USAA has not shown how the cited finding on the motion for summary judgment regarding doctrine of equivalents in *Wells Fargo I* case has any direct bearing on the “capture the image of the check [with / using] the camera” claim construction dispute in the present case. *See Wells Fargo I*, Dkt. No. 294 at 6 (E.D. Tex. Oct. 30, 2019).

Regardless of whether the cited discussion in *Wells Fargo I* is relevant, however, this above-reproduced prosecution history is similar to the above-discussed disclosures in the specification because this prosecution history refers to capturing “the image” that was monitored and that passed the monitoring criteria. (Dkt. No. 212, Ex. K, Nov. 6, 2021 Appeal Brief at 7–8.)

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
<p>“capture the image of the check [with / using] the camera”</p> <p>“capture the image of the check”</p>	<p>Plain meaning</p>
<p>“when the image of the check [in the field of view] passes the monitoring criterion”</p>	<p>“at or after the moment the image of the check [in the field of view] passes the monitoring criterion”</p>

16. “feedback . . . regarding the image of the check with respect to the monitoring criterion”

<p>“feedback . . . regarding the image of the check with respect to the monitoring criterion” (’571 Patent, Claim 2)</p>	
USAA’s Proposed Construction	PNC’s Proposed Construction
<p>“instructions to the user regarding actions to take in order to satisfy one or more monitoring criteria based on analysis of the monitoring criteria by the system”</p>	<p>No further construction necessary.</p>

(Dkt. No. 170, Ex. B, at 3; Dkt. No. 226, Ex. A, at 57.)

(a) The Parties’ Positions

USAA argues that “[b]ecause the feedback of Claim 2 occurs before capture, a POSA would have understood that it must be referring to instructions to the user regarding actions to take in order to satisfy one or more monitoring criteria.” (Dkt. No. 197, at 30.)

PNC responds that “[t]his Court . . . declined to adopt the narrowing construction that USAA . . . proposed for this term in *Wells Fargo I*, and [the Court] should do so again for the same reasons here.” (Dkt. No. 212, at 32.)

USAA replies as to this term together with the “instructing” terms noted above as to the ’432 Patent, the ’559 Patent, the ’681 Patent, and the ’605 Patent. (*See* Dkt. No. 215 at 3 n.3.)

(b) Analysis

Claim 2 of the '571 Patent recites:

2. The non-transitory computer-readable medium of claim 1, further comprising instructions that provide *feedback*, via the mobile device to a user of the mobile device, *regarding the image of the check with respect to the monitoring criterion* prior to capturing the image of the check.

USAA proposes the same construction for the present disputed term that USAA proposed for the term “feedback” in *Wells Fargo I*. See *Wells Fargo I* at 38. The Court rejected that proposal in *Wells Fargo I*. See *id.* at 38–39. USAA does not persuasively justify departing from the Court’s analysis in *Wells Fargo I*.

In particular, USAA’s proposed construction would exclude feedback indicating that monitoring criteria *have been satisfied* (as opposed to actions to take in order *to satisfy* one or more monitoring criteria). USAA has not persuasively justified such an exclusion. On the contrary, Claim 10 of the '571 Patent weighs against imposing such an exclusion because that claim recites “feedback . . . when the image of the check in the field of view *passes* the monitoring criterion” This context provided by other claims demonstrates that “feedback” regarding the monitoring criteria can include feedback that monitoring criteria have been satisfied. See *Phillips*, 415 F.3d at 1314 (“Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.”) (citation omitted). The specification includes a similar disclosure in this regard. See '571 Patent at 7:26–28 (“The feedback may also advise the user 102 when the image 230 passes the one or more monitoring criteria and to capture the image of the check 108.”).

USAA argues, as to the analysis in *Wells Fargo I*, as follows:

The Court therefore held that, where Claim 10 was involved, feedback was not limited to instructions to the user regarding how to satisfy the monitoring criterion. Here, however, only Claim 2 is at issue, and Claim 2 clearly does not describe

feedback after the monitoring criteria are satisfied because it explicitly refers to feedback “*prior to capturing the image of the check.*” Because the feedback of Claim 2 occurs before capture, a POSA would have understood that it must be referring to instructions to the user regarding actions to take in order to satisfy one or more monitoring criteria.

(Dkt. No. 197, at 30). USAA’s argument is unpersuasive. First, USAA does not justify setting aside the general principle that terms should be construed consistently throughout all of the claims. Second, Claim 11 of the ’571 Patent depends from Claim 10 and recites that “the feedback comprises instructions to the user to capture the image of the check,” which demonstrates that Claim 10, like Claim 2, can be understood as referring to feedback prior to capture. Finally, USAA’s reliance on the “feedback loop” illustrated in Figure 8 (*see* Dkt. No. 197, at 29) pertains to a particular “implementation” (’571 Patent at 15:10–12) and does not persuasively support USAA’s proposed construction. The opinions of USAA’s expert in this regard are unpersuasive. (*See* Dkt. No. 197, Ex. 14, June 1, 2021 Mott Decl., at ¶¶ 51–52.) Additional disclosures cited by USAA are also unpersuasive. *See* ’571 Patent at 7:65–8:3, 8:16–20 & 9:39–43.

Wells Fargo I concluded: “In the context of the surrounding claim language, the meaning of ‘feedback’ and ‘feedback information’ is clear without construction,” and “the Court rejects Plaintiff’s proposed construction and determines that ‘feedback’ and ‘feedback information’ each have their plain and ordinary meaning without the need for further construction.” *Wells Fargo I* at 39. For the reasons set forth in *Wells Fargo I* and set forth above, the Court reaches the same conclusion here for the present disputed term.

The Court therefore hereby expressly rejects PNC’s proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**feedback . . . regarding the image of the check with respect to the monitoring criterion**” to have its **plain meaning**.

17. “image monitoring and capture module”

“image monitoring and capture module” (’571 Patent, Claims 1, 9)	
USAA’s Proposed Construction	PNC’s Proposed Construction
Not subject to § 112(6) and not indefinite. No further construction necessary.	Subject to § 112(6). Function: Image monitoring and capture Corresponding structure: Indefinite

(Dkt. No. 170, Ex. B, at 4; Dkt. No. 226, Ex. A, at 58.)

(a) The Parties’ Positions

USAA argues that PNC cannot rebut the presumption against means-plus-function treatment for this non-means term. (*See* Dkt. No. 197, at 30–32.) USAA further argues that “a POSA would have understood the image and capture module to refer to the mobile device camera and software for interacting with and controlling the camera,” and “[t]his includes, of course, interacting and manipulating the results of the camera’s operations.” (*Id.* at 30 (citation omitted).)

PNC responds that “module” is a nonce word that does not connote structure here, and “[t]he prefix ‘image monitoring and capture’ also does not impart structure.” (Dkt. No. 212, at 17.) PNC also argues that “examples from the specification cannot, standing alone, demonstrate that a claim term connotes a specific structure.” (*Id.*, at 18.) As to corresponding structure, PNC argues that the disclosures identified by USAA describe results, not algorithms, and are insufficient. (*See id.* at 20–21.)

USAA replies by reiterating that “the claims and specification denote sufficiently definite structure – i.e. the mobile device camera and software for interacting with the camera.” (Dkt. No. 215, at 11 (citing Dkt. No. 197, at 30–32).) USAA further argues: “PNC argues that this somehow does not denote sufficient structure because there is an alternate scenario where the camera is ‘detachably coupled’ to the mobile device. PNC Br. at 18–19. But nothing in the claim language or specification says that the camera cannot be part of the ‘module’ if it is coupled via a wire as opposed to integrated into the mobile device housing.” (Dkt. No. 215, at 11.) Finally, USAA argues that even if this is found to be a means-plus-function term, no algorithm is required because the corresponding structure is not a general-purpose computer, and even if an algorithm is found to be required then the specification “discloses algorithms, including specific monitoring criteria that may be used (i.e. brightness, dimensions, skewing, warming, corner detection)” (*Id.* (citations omitted).)

(b) Analysis

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” “In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

“[T]he failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015)

(citations and internal quotation marks omitted). “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word “means” gives rise to a “strong” presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption “is not readily overcome” and that this presumption cannot be overcome “without a showing that the limitation essentially is devoid of anything that can be construed as structure.” *Id.* (citations omitted). Instead, *Williamson* found, “[h]enceforth, we will apply the presumption as we have done prior to *Lighting World . . .*” *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court’s finding that the term “distributed learning control module” was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that “‘module’ is a well-known nonce word.” 792 F.3d at 1350.

Claim 1 of the ’571 Patent, for example, recites (emphasis added):

1. A non-transitory computer-readable medium comprising computer-readable instructions for depositing a check that, when executed by a processor, cause the processor to:

monitor an image of the check in a field of view of a camera of a mobile device with respect to a monitoring criterion using an *image monitoring and capture module* of the mobile device;

capture the image of the check with the camera when the image of the check passes the monitoring criterion; and

provide the image of the check from the camera to a depository via a communication pathway between the mobile device and the depository.

Claim 9 of the '571 Patent similarly recites a limitation of “monitor an image of the check in a field of view of the camera with respect to a monitoring criterion using an image monitoring and capture module associated with the camera.”

On one hand, “image monitoring and capture module of the device” is not “drafted in the same format as a traditional means-plus-function limitation” because it is not recited as being “for” performing a function. *Id.*

On the other hand, *Williamson* referred to the word “module” as a “nonce” word that does not connote structure. *Id.* More recently, the Federal Circuit reaffirmed that “[m]odule’ is a well-known nonce word that can operate as a substitute for ‘means.’” *Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1006 (Fed. Cir. 2021) (citing *Williamson*, 792 F.3d at 1350).

In some cases, “the presence of modifiers can change the meaning of ‘module.’” *Williamson*, 792 F.3d at 1351.

Here, however, the phrase “image monitoring and capture” that precedes the word “module” has not been shown to connote structure and instead recites function. Read in the context of the claim as a whole (reproduced above), the term “image monitoring and capture module” is tantamount to a recital of a “module for image monitoring and capture” under the circumstances of the present case. *See Rain Computing*, 989 F.3d at 1006 (“Nor does the prefix ‘user identification’ impart structure because it merely describes the function of the module: to identify a user.”) (citing *Williamson*, 792 F.3d at 1351).

To the extent USAA argues that this ‘module’ term connotes a camera structure, the specification discloses that “the image monitoring and capture module 456 may *include* the camera 207 contained within the mobile device 106” or, “alternately, the camera 207 may be detachably coupled to the mobile device 106 such as through a secure digital (SD) slot or over any suitable

communications bus, such as USB (universal serial bus).” ’571 Patent at 13:1–6 (emphasis added). This disclosure weighs against finding that the term “image monitoring and capture module” connotes any particular class of structures. The opinion of USAA’s expert to the contrary is unpersuasive. (See Dkt. No. 197, Ex. 14, June 1, 2021 Mott Decl., at ¶ 45.)

The decisions of this Court cited by USAA do not compel finding otherwise. Those cases, which involved different patents, different claim language, and different specifications, do not undercut the analysis set forth above based on the particular context provided by the claim language in the present case. See *Huawei Techs. Co. v. Verizon Commc’ns, Inc.*, 2021 WL 150442, at *12 (E.D. Tex. Jan. 15, 2021) (“receiving module,” “processing module,” and “generating module” were not means-plus-function terms because “it appears undisputed that the claims are directed to OTN equipment”); see also *S3G Technology, LLC v. UniKey Techs., Inc.*, 2017 WL 5178837, at *6 (E.D. Tex. July 7, 2017) (“dialogue module” was not a means-plus-function term because it was understood as referring to “code or instructions”).

Also, USAA relies on disclosures in the specification (cited below) as showing that this “module” term connotes structure, but “[t]hat the specification discloses a structure corresponding to an asserted means-plus-function claim term does not necessarily mean that the claim term is understood by persons of ordinary skill in the art to connote a specific structure or a class of structures.” *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1344 (Fed. Cir. 2019).

Finally, USAA’s criticism of the qualifications of PNC’s expert does not affect the Court’s analysis, particularly given that the Court need not rely on the opinion of PNC’s expert to reach the Court’s conclusion that 35 U.S.C. § 112, ¶ 6 applies to the term “image monitoring and capture module” based on the principles set forth by the Federal Circuit in *Williamson*. (See Dkt. No. 197, Ex. 12, June 23, 2021 Bovik dep. at 24:9–14, 32:6–10, 168:18–169:9, 170:5–8 & 180:7–13.)

On balance, the term “image monitoring and capture module” does not connote sufficient structure to avoid means-plus-function treatment, and PNC has rebutted the presumption against means-plus-function treatment for this non-means term. In accordance with the foregoing analysis, and as proposed by PNC, the claimed function is “image monitoring and capture” (and USAA presents no competing proposal as to the claimed function).

As for corresponding structure, USAA presents no explicit proposal (instead proposing only that this is *not* a means-plus function term), but USAA’s briefing sets forth substantial discussion of purported structure in the specification such that USAA cannot be said to have waived any argument that the specification sets forth adequate corresponding structure under 35 U.S.C. § 112, ¶ 6.

The specification discloses:

The client apparatus 450 may include one or more software objects operating on a mobile device 106, such as described above. The client apparatus 450 may include a communications module 452, a check processing module 454, and an image monitoring and capture module 456. The client apparatus 450 may receive, in one example, one or more check images 458 as an input and output one or more processed images 460.

In an implementation, the check images 458 may be received following a software call from the check processing module 454 to the image monitoring and capture module 456. In such an implementation, the image monitoring and capture module 456 may include the camera 207 contained within the mobile device 106. Alternately, the camera 207 may be detachably coupled to the mobile device 106

....

* * *

The check processing module 454 may be configured, in one example, to cause the image monitoring and capture module 456 to monitor an image of at least one side of a check provided in a field of view of the camera 207 and then capture the image after it passes monitoring criteria.

'571 Patent at 12:55–13:6 & 13:35–38; *see id.* at 15:30–33 (“the system may instruct a camera associated with the mobile device to monitor and capture an image of the negotiable instrument in conjunction with monitoring criteria”).

On balance, the specification discloses sufficient structure that is clearly linked to the claimed function, namely the “image monitoring and capture module 456” that is set forth in the specification.

PNC argues that these disclosures are insufficient because the specification does not set forth an algorithm or otherwise explain how the corresponding structure operates to perform the claimed function, but this requirement arises only when the corresponding structure is a general-purpose computer. *See Aristocrat Techs. Austral. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1334 (Fed. Cir. 2008); *see also Triton Tech*, 753 F.3d at 1378–79. Here, the “image monitoring and capture module 456” is not a general-purpose computer but rather is a particular disclosed software structure.

The Court therefore hereby finds that **“image monitoring and capture module”** is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is **“image monitoring and capture,”** and the corresponding structure is **“image monitoring and capture module 456 as set forth in the specification; and equivalents thereof.”**

18. “instructions that provide feedback” / “feedback” / “feedback comprises instructions”

<p>“instructions that provide feedback” / “feedback” / “feedback comprises instructions” ('571 Patent, Claims 2–5, 10)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>No further construction necessary. Terms have patentable weight.</p>	<p>Terms lack patentable weight.</p>

(Dkt. No. 170, Ex. B, at 4; Dkt. No. 226, Ex. A, at 58.)

In e-mail correspondence to the Court on November 9, 2021, PNC withdrew its arguments as to these disputed terms.

The Court accordingly hereby construes **“instructions that provide feedback / feedback / feedback comprises instructions”** to have their **plain meaning**.

19. “deposit system”

<p>“deposit system” (’779 Patent, Claims 10, 11)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>“a system for providing a check to a depository in a form sufficient to allow money to be credited to an account”</p>	<p>“system operated by a depository”</p>

(Dkt. No. 170, Ex. B, at 5.)

USAA submits in its reply claim construction brief that it “omits the terms ‘PDA’ and ‘deposit system’ because USAA did not elect those claims in its court-ordered claim narrowing.”

(Dkt. No. 215, at 1 n.1.)

Based on this representation by USAA that this term no longer appears in any asserted claim, the Court does not further address this term.

20. (a) “determin[ing] whether the image of the check aligns with the alignment guide” / “the image of the check is determined to align with the alignment guide” and (b) “when the image of the check is determined to align with the alignment guide” and (c) “when at least [one edge / a first edge and a second edge / a first edge, second edge, and a third edge] of the image of the check aligns”

<p>“determin[ing] whether the image of the check aligns with the alignment guide” “the image of the check is determined to align with the alignment guide” (’779 Patent, Claims 1, 10)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>“determining that the alignment of the image of the check is within an acceptable threshold such that the image can be electronically read”</p> <p>Does claim the subject matter which the inventors regard as the invention.</p>	<p>“ascertain by calculation whether the image of the check aligns with the alignment guide”</p> <p>“the processor ascertains by calculation that the image of the check aligns with the alignment guide”</p> <p>Does not claim the subject matter which the inventors regard as the invention.</p>
<p>“when the image of the check is determined to align with the alignment guide” (’779 Patent, Claims 1, 10)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>“at or after the moment the image of the check is determined to align with the alignment guide”</p>	<p>“when the processor ascertains by calculation that the image of the check aligns with the alignment guide”</p>
<p>“when at least [one edge / a first edge and a second edge / a first edge, second edge, and a third edge] of the image of the check aligns” (’779 Patent, Claims 7–9, 15–17)</p>	
<p>USAA’s Proposed Construction</p>	<p>PNC’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“when the processor ascertains by calculation that at least [one edge / a first edge and a second edge / a first edge, second edge and a third edge] of the image of the check aligns”</p>

(Dkt. No. 170, Ex. B, at 5–6; Dkt. No. 226, Ex. A, at 59 & 60.)

(a) The Parties' Positions

USAA argues that “[t]he PTAB’s prior construction is well reasoned and anchored in the specification and should also apply in this case.” (Dkt. No. 197, at 34 (citation omitted).) USAA also argues that “PNC’s proposed construction departs from the PTAB’s construction and is contrary to the specification.” (*Id.*, at 35.)

PNC responds that “PNC’s proposed construction is supported by the claim language itself, which expressly provides that the way in which the claimed processor measures alignment is by determining whether the check image ‘aligns with the alignment guide.’” (Dkt. No. 212, at 34 (citing ’779 Patent, Cls. 1 & 10).) PNC argues that “USAA’s proposed construction erroneously expands the scope of the claims by construing the ‘alignment guide’ limitation out of element (a) entirely,” and “USAA’s proposed construction encompasses *any* type of alignment determination, not just the alignment ascertained by calculation using the alignment guide described in the patent.” (*Id.*, at 34.) Further, PNC submits: “USAA relies heavily on the fact that its proposed construction was adopted by the PTAB in a prior proceeding involving a different petitioner. USAA Br. 34-35. However, the parties had represented to the PTAB that that term did not require construction, USAA Ex. 9 at 12–13, and they therefore did not address claim construction for the term in their submissions.” (*Id.*, at 35.) Finally, “PNC agrees with USAA’s proposal of ‘at or after the moment.’” (*Id.*)

USAA replies that “[w]ith respect to the language ‘determine whether the image of the check aligns with the alignment guide,’ PNC provides no reason to depart from the PTAB’s construction, simply ignoring the PTAB’s detailed reasoning and analysis.” (Dkt. No. 215, at 12 (citation omitted).) USAA also argues that “PNC’s argument that USAA’s construction fails

because the check image ‘would not necessarily be suitable for processing by the bank’ is a red herring; the construction only states that the image need be ‘within an acceptable threshold such that the image can be electronically read’ when captured.” (*Id.*)

(b) Analysis

As a threshold matter, regarding the word “when,” “PNC agrees with USAA’s proposal of ‘at or after the moment.’” (Dkt. No. 212, at 35.)

As to the term “determine whether the image of the check aligns with the alignment guide,” the PTAB construed this term to mean “determining that the alignment of the image of the check is within an acceptable threshold such that the image can be electronically read.” *Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00005, Paper 25, Decision, at 13 (P.T.A.B. June 3, 2019). PNC also cites a similar ruling in another PTAB proceeding. *See Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00003, Paper 25, Decision, at 14 (P.T.A.B. June 3, 2019) (“‘determin[ing] whether the at least one feature of the instrument aligns with the alignment guide’ means determining that the alignment of at least one feature of the instrument is within an acceptable threshold such that the captured information can be electronically read”).

The PTAB stated that “[t]he ’779 patent specification repeatedly discloses that ‘determin[ing] whether the image of the check aligns with the alignment guide’ is for the purpose of determining that the image of the check can be easily processed and cleared, which requires being able to electronically read information from the image.” *Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00005, Paper 25, Decision, at 11–12 (P.T.A.B. June 3, 2019) (citing ’779 Patent at 3:66–4:2, 5:42–48, 8:55–60 & 10:16–17). The PTAB further stated that “the ’779 patent specification further discloses that processing an image of a check entails electronically reading information from the check and that proper alignment of the image of the check with the

alignment guide ensures that information regarding the check can be electronically read from the image.” *Id.* at 12; *see id.* at 12–13 (citing ’779 Patent at 7:27–29, 10:18-21, 13:47-48, 3:55-59, 13:66-14:6). PNC does not contest that these PTAB proceedings can be considered.

The persuasive value of the PTAB construction is undercut, however, by the lack of competing claim construction proposals at the PTAB regarding the term construed by the PTAB. *See Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00005, Paper 25, Decision, at 11 (P.T.A.B. June 3, 2019) (“The parties do not expressly construe this claim term either in their briefing in this proceeding or their DCT [(district court)] claim construction briefing.”); *see also Wells Fargo Bank, N.A. v. United Servs. Auto. Ass’n*, CBM2019-00003, Paper 25, Decision, at 14 (P.T.A.B. June 3, 2019) (same).

Moreover, the support cited by the PTAB and by USAA in the present case is unpersuasive as to USAA’s proposed construction. USAA cites disclosures in the specification regarding the purpose of using an alignment guide. *See, e.g.*, ’779 Patent at 5:42–48 (“[t]he alignment guide may be provided during image capture to assist the user 102 in positioning the check 108 so that the image of the check 108 may be captured in such a manner that it may be more easily processed and cleared during subsequent operations”) & 10:16–17 (“[t]he alignment guide is intended to ensure that the image of the check is suitable for one or more processing tasks”), *see also id.* at 3:55–59 & 3:66–4:2.

These disclosures, however, are permissive in nature and relate to purposes of alignment rather than any necessary limitation of the claimed invention as a whole or any definition of terms such as “determin[ing] whether the image of the check aligns with the alignment guide.” For example, the specification discloses that a processor uses an “alignment guide” to “increase the *likelihood* of capturing a digital image of the check 108 that may be readable and processed such

that the check 108 can be cleared.” *Id.* at 3:55–58 (emphasis added). Use of an alignment guide does not guarantee that the check image “can be electronically read.” As PNC suggests, for example, “a perfectly aligned check may be out of focus.” (Dkt. No. 212, at 35.) USAA’s expert agreed that a check aligned with an alignment guide still might “[n]ot necessarily” be suitable for processing and deposit by a bank. (*Id.*, Ex. V, June 29, 2021 Mott dep. at 241:14–242:7.)

On balance, the PTAB’s construction does not give proper effect to the phrases “aligns with the alignment guide” and “align with the alignment guide” in the terms here at issue. The specification confirms that these phrases are used in accordance with their readily understood ordinary meaning. *See, e.g.*, ’779 Patent at 14:65–15:8 (“so that the image of the check that is displayed in the field of view is positioned within the alignment guide”; “when the image of the check is within the alignment guide”); *see also id.* at Fig. 9 (“Adjust alignment guide and/or image with respect to alignment guide.”).

As to PNC’s proposal of “calculation,” however, PNC does not adequately demonstrate the necessity of such a construction, particularly given that the ’779 Patent does not use the word “calculation.” For example, the ’779 Patent refers to “edge detection” but does so without referring to “calculation.” *See id.* at 10:60–65 (“Alternatively or additionally, edge detection may be used to detect the check. Edge detection techniques are well known and any suitable method may be used herein. Alternative or additional methodology for check detection may use tile-cropping to detect and process the check.”).

PNC’s proposal of “calculation” would thus tend to confuse rather than clarify the scope of the claims and should be rejected. The extrinsic general-purpose dictionary definition of “determine” submitted by PNC does not compel otherwise. (*See* Dkt. No. 212, Ex. Y, *American Heritage College Dictionary* 386 (4th ed. 2007) (“2. To establish or ascertain definitely, as after

investigation or calculation.”).) At the November 10, 2021 hearing, PNC was amenable to using the word “determining” rather than ascertaining “by calculation.”

Based on the foregoing, the Court hereby expressly rejects USAA’s proposal of the PTAB construction as well as PNC’s proposal of constructions that require “calculation.” Instead, the ’779 Patent uses the terms “determin[ing] whether the image of the check aligns with the alignment guide” and “the image of the check is determined to align with the alignment guide” accordingly to their plain meaning, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The same analysis applies to the other disputed terms here at issue, namely “when the image of the check is determined to align with the alignment guide” and “when at least [one edge / a first edge and a second edge / a first edge, second edge, and a third edge] of the image of the check aligns.” As noted above, regarding the word “when,” “PNC agrees with USAA’s proposal of ‘at or after the moment.’” (Dkt. No. 212, at 35.)

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
<p>“determin[ing] whether the image of the check aligns with the alignment guide”</p> <p>“the image of the check is determined to align with the alignment guide”</p>	<p>Plain meaning</p>
<p>“when the image of the check is determined to align with the alignment guide”</p>	<p>“at or after the moment the image of the check is determined to align with the alignment guide”</p>

<p>“when at least [one edge / a first edge and a second edge / a first edge, second edge, and a third edge] of the image of the check aligns”</p>	<p>“at or after the moment at least [one edge / a first edge and a second edge / a first edge, second edge and a third edge] of the image of the check aligns”</p>
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V. DISPUTED TERMS IN PATENTS ASSERTED BY PNC AGAINST USAA

21. “external system”

<p>“external system” ('788 Patent, Claims 1, 7, 8; '786 Patent, Claims 1, 3, 7, 8, 12)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>'788 Patent: “a system external to the institution receiving the message from the data source system”</p> <p>'786 Patent: “a system external to the institution receiving the request from the data source system”</p>	<p>No further construction necessary.</p>

(Dkt. No. 170, Ex. B, at 11 & 12; Dkt. No. 226, Ex. A, at 62.)

(a) The Parties’ Positions

PNC argues that “[t]he specification makes clear that the ‘external system’ is not just ‘external’ to other claimed hardware or software components, but to the institution that is using the web services hub to receive, transform, and send the message or request.” (Dkt. No. 196, at 2.)

PNC also submits that “[b]ecause the figure and specification are not using ‘internal’ and ‘external’ service in relation to the web services hub or its components, the logical inference is that they are using ‘internal’ and ‘external’ services in the same way as the background of the invention and the exemplary embodiment, namely, as internal or external to the *institution* providing the web services hub.” (*Id.*, at 3.)

USAA responds that “the term ‘external’ indicates a component that is outside the ‘web services hub,’” and “[t]here is no further requirement that the ‘external system’ also be external to the entire institution that operates the web services hub.” (Dkt. No. 213, at 1.) USAA also argues that “[n]othing in the specification suggests that the location of such a web service is important in the context of the invention; to the contrary, the specification repeatedly states that the sending and receiving systems (*e.g.*, the data source system and the external system) are interchangeable and that their physical or logical locations are unimportant to their functions.” (*Id.*, at 2 (discussing ’786 Patent at 3:50–62).) Further, USAA submits that “[t]he Background section of the specification further confirms USAA’s interpretation.” (*Id.*, at 2.)

PNC replies that “USAA’s proposed construction reads out the distinction between ‘internal’ and ‘external’ components drawn in the specification, and should be rejected,” and “[a]s PNC has explained, Figure 1’s use of the terms ‘external’ and ‘internal’ to refer to web services that are both outside of the web services hub means that an ‘external’ system is not just outside of the web services hub, but part of a different institution altogether.” (Dkt. No. 214, at 1.) PNC also argues: “That both ‘internal’ and ‘external’ systems may require transformation services in order to communicate does not erase the clear distinction between the two different types of web services drawn in the intrinsic evidence.” (*Id.*, at 2.)

(b) Analysis

Claim 1 of the ’788 Patent, for example, recites (emphasis added):

1. A method, comprising:
 - receiving a message from a data source system, the message comprising at least one header parameter stored in at least one header parameter field, the message to be transmitted to an *external system*;
 - determining the message type based on the at least one header parameter;
 - verifying access and transmission rights of the data source system and the *external system*; and
 - transmitting the message to a message transformation logic module;

receiving the message to be transformed from the data source system at the message transformation logic module from a secure service router, the message comprising the at least one header parameter stored in the at least one header parameter field.

The Abstract of the '788 Patent states (emphasis added): “A web services hub receives a request from a data source system, transforms the request, and transmits the transformed request to an *external system*.”

Figure 1 of the '788 Patent illustrates “web services hub 101” and “internal or external web services 114, 116, 118.” The specification further discloses:

[B]usiness enterprise network 100 generally may include a web services hub 101, one or more data source systems 104, 108, 112 [and] one or more target internal or external web services networks 114, 116, 118

* * *

In general, target web services 114, 116, 118 may be any of data sources 104, 108, 112 described above. The difference in general nomenclature indicates whether a network, computer application, data system or web services network provides or receives data in the underlying data transformation process In various embodiments, data source systems 104, 108, 112 may be networks, computer applications or systems at physical or logical locations that are external or internal to business enterprise network 100 [and] may be centrally located within business enterprise network 100 or at a remote physical address.

'786 Patent at 3:12–15 & 3:50–62 (emphasis added). The '786 Patent resulted from a divisional of the '788 Patent, so these two patents share the same specification.

Because the specification thus discloses that a data source system may itself be a target of a message from another data source system, these patents do not use the word “external” to refer to a destination. The claim language, such as reproduced above, provides no direct insight into the meaning of “external,” but this word should carry some meaning where it is used in the claims. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010)

(“Claims must be ‘interpreted with an eye toward giving effect to all terms in the claim.’”) (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)).

The Background of the Invention provides context by stating:

[A] *source* computer application or network *within a corporate enterprise*, for example, a bank, may need to share confidential customer information with *external* networks of partners or other organizations.

’788 Patent at 1:40–44 (emphasis added);

Interpreting an “external system” as external to a particular corporate enterprise is supported by this statement in the Background of the Invention and is also consistent with the illustration of both “Internal Web Services” (labeled 118) and “External Web Services” (labeled 116) in Figure 1 of the ’788 Patent and the ’786 Patent.

The remainder of the Background of the Invention, cited by USAA, states:

Corporate reliance on technology has increasingly become more complex and pervasive. The latest advances in information technology have resulted in computer applications that are much faster and more efficient. However, the proliferation of different computer systems and applications that use different communications protocols, security mechanisms, languages, data structures and platforms has also made the information technology infrastructure of the typical business enterprise more complex. Different business processes within a typical corporate enterprise may use different computer applications or networks. In such a scenario, each computer application or network is secured and optimized for a particular business process, rather than for the enterprise as a whole. For example, a bank may have one computer application for securely accepting new customer account information and another to verify the credit worthiness of customers using sensitive data such as their social security numbers. Accordingly, the credit verification computer application may implement a more stringent data security standard than the computer application accepting new customer account information. In such a situation, source computer applications have to employ a compatible encryption standard, or authentication mechanism such as, for example, the OASIS Web Services Security (WSS) WS-Security v1.1 standard, to secure messages before sending them to the target credit verification computer application.

’788 Patent at 1:12–39.

USAA argues that interpreting “external system” as referring to a system outside of a particular corporate enterprise would be inconsistent with this discussion that “[d]ifferent business processes within a typical corporate enterprise may use different computer applications or networks” (*id.* at 1:21–23), but the claims here at issue refer to an “external system,” and “[i]t is not necessary that each claim read on every embodiment.” *See Baran v. Med. Dev. Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010).

Interpreting “external system” in relation to a particular corporate enterprise is also consistent with how Claim 1 of the ’786 Patent uses both the word “external” and the phrase “external system,” reciting for example (emphasis added): “a web services hub comprised of hardware, the hardware comprising at least one non-transitory memory connected to at least one processor, the web services hub configured to receive a request from a data source system that is *external* to the web services hub; transform the request into a transformed request, and transmit the transformed request to an *external system*, the request to be transformed by the web services hub into the transformed request.” Because the claim thus refers to the data source system as being external to the web services hub, the distinct recital of transmitting to an “external system” implies that “external system” means something other than merely being external to the data source system.

The Court therefore hereby construes “**external system**” to mean “**a system external to the corporate enterprise that includes the data source system.**”

22. “the message to be transmitted to an external system”

“the message to be transmitted to an external system” (’788 Patent, Claim 1)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction necessary.	“The message is addressed to an external system”

(Dkt. No. 170, Ex. B, at 11; Dkt. No. 226, Ex. A, at 64.)

(a) The Parties’ Positions

PNC argues that “this claim limitation simply identifies the message as the one that is going to be transmitted (after transformation) to an external system,” and “the word ‘address’ appears in the specification only once, in a completely unrelated context.” (Dkt. No. 196, at 3.)

USAA responds that “whether a given message satisfies the claim element ‘to be transmitted’ cannot depend on intent to perform future, unclaimed steps using the message; it must be based on a property of the message itself.” (Dkt. No. 213, at 3 (citations omitted).) USAA further argues: “PNC’s argument that the specification does not expressly discuss an ‘address’ is misdirection. It is the claims, by requiring receipt of a message ‘to be transmitted to an external system,’ that require the message to be addressed to that destination.” (*Id.*, at 4.)

PNC replies that “the claim language is not limited to any specific means by which the message is conveyed to the external system.” (Dkt. No. 214, at 2 (citation omitted).) PNC also argues that “PNC’s construction does not, as USAA suggests, rely on ‘intent to perform future, unclaimed steps using the message’ or render any claim limitation ‘superfluous,’” and “[i]f, for example, the message is routed based on the nature of the request rather than an ‘address,’ a POSA could examine the message and the routing system and determine that the message is to be

transmitted to an external system without knowing anything about the ‘intent’ of the user.” (*Id.* (citation omitted).)

At the November 10, 2021 hearing, PNC noted that the header information for an embodiment as shown in Table 1 of the ’788 Patent does *not* include an address. USAA responded that Table 1 shows *additional* information. Also, USAA noted that actually transmitting is recited in *dependent* Claim 7 of the ’788 Patent. Further, USAA submitted that it is not proposing a specific type of address and is not attempting to read an overly “technical” meaning into USAA’s proposal of the word “address.”

(b) Analysis

Claim 1 of the ’788 Patent, for example, recites (emphasis added):

1. A method, comprising:
 - receiving a message from a data source system, the message comprising at least one header parameter stored in at least one header parameter field, *the message to be transmitted to an external system*;
 - determining the message type based on the at least one header parameter;
 - verifying access and transmission rights of the data source system and the external system; and
 - transmitting the message to a message transformation logic module;
 - receiving the message to be transformed from the data source system at the message transformation logic module from a secure service router, the message comprising the at least one header parameter stored in the at least one header parameter field.

USAA does not persuasively support its proposal of requiring an “address,” which is a word that does not appear in the ’788 Patent (except in the disclosure that “data source systems 104, 108, 112 may be centrally located within business enterprise network 100 or at a remote physical address,” wherein the reference to a “physical address” is not relevant to the present dispute, *see* ’788 Patent at 3:43–45).

Still, PNC’s suggestion that this term can be understood as “simply identify[ing] the message as the one that is going to be transmitted (after transformation) to an external system”

would leave the claim scope amorphous because, as USAA argues, “any received ‘message’ could theoretically, in the future, be transmitted to an ‘external system,’ PNC’s interpretation would render ‘to be transmitted to an external system’ superfluous.” (Dkt. No. 213, at 5.) This is particularly troubling to the extent it might depend on the intent or plans of an accused infringer. *See, e.g., Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1353 (Fed. Cir. 2001) (“We are not prepared to assign a meaning to a patent claim that depends on the state of mind of the accused infringer.”). Instead, the phrase “to be transmitted to an external system” should be given some affirmative meaning. *See Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1399 (Fed. Cir. 2014) (favoring a construction that does not render another limitation “superfluous”).

In the context of the above-reproduced claim (which, notably, does not recite a step of transmitting the message), the phrase “to be transmitted to an external system” requires that the message must be somehow directed to the external system. Although even USAA appears to acknowledge that the claim is broad as to the manner of directing the message (*see* Dkt. No. 213, at 4), the message must be somehow affirmatively directed to the external system so as to avoid rendering this claim term superfluous or otherwise too amorphous.

The Court therefore hereby expressly rejects USAA’s proposal of requiring an “address” but hereby construes **“the message to be transmitted to an external system”** to mean **“wherein the message is directed to be transmitted to an external system.”**

23. “verifying access and transmission rights of the data source system and the external system”

<p>“verifying access and transmission rights of the data source system and the external system” (’788 Patent, Claim 1)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“using information contained in the header parameter(s) of the message to determine if the data source has permission to send messages to the external system and whether the external system has permission to receive messages from the data source”</p>

(Dkt. No. 170, Ex. B, at 11; Dkt. No. 226, Ex. A, at 65.)

(a) The Parties’ Positions

PNC argues that the specification “leaves open ended the manner in which access and transmission rights can be verified.” (Dkt. No. 196, at 5.) PNC argues that “[w]hile the specification discloses using user names and passwords or tokens as ways to verify access and transmission rights, nothing in the specification mandates that any specific credentials must be used or that they must be contained in the header parameters of the message.” (*Id.*, at 5–6.) PNC also submits that “[t]he specification says nothing about permission to send messages to the external system.” (*Id.*, at 7 (citation omitted).) Further, PNC argues that “[n]othing in the specification suggests that information provided by the data source system is used to determine the rights of the external system and, if the inventors had intended the system to work this way, they presumably would have said so.” (*Id.*)

USAA responds that “[c]onstruction is necessary to (1) distinguish ‘access rights’ (permission to receive messages from the data source) from ‘transmission rights’ (permission to

send messages to the external system) and (2) clarify how these ‘rights’ are verified for the two referenced systems.” (Dkt. No. 213, at 5 (footnote omitted).)

PNC replies that “USAA confuses, rather than clarifies, concepts that are already laid out separately in the plain claim language.” (Dkt. No. 214, at 3.) PNC also argues that “USAA’s inclusion of ‘information contained in the header parameter’ in its construction improperly reads an embodiment from the specification into the claims,” and “the claim is broad enough to encompass *any* method of verifying access and transmission rights.” (*Id.*)

(b) Analysis

Claim 1 of the ’788 Patent, for example, recites (emphasis added):

1. A method, comprising:

receiving a message from a data source system, the message comprising at least one header parameter stored in at least one header parameter field, the message to be transmitted to an external system;

determining the message type based on the at least one header parameter;

verifying access and transmission rights of the data source system and the external system; and

transmitting the message to a message transformation logic module;

receiving the message to be transformed from the data source system at the message transformation logic module from a secure service router, the message comprising the at least one header parameter stored in the at least one header parameter field.

As a threshold matter, PNC acknowledges in its opening claim construction brief that “each system” (both the “data source system” and the “external system”) “has access rights and transmission rights.” (Dkt. No. 196, at 4–5.) Also, PNC does not appear to contest that “access” rights and “transmission” rights are distinct from one another. *See CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”) (citation omitted).

As to USAA’s proposal of “using information contained in the header parameter(s),” the above-reproduced claim language does not specify any particular manner of authentication or any particular source of authorization. The specification discloses:

User registry server 120 may be implemented as an authorization module to review access and transmission rights of users or transactions interfacing with business enterprise network 100. In one embodiment, user registry server 120 may be implemented as an authentication and authorization module configured to verify the identity of users. In such an embodiment, users may supply clear text usernames and passwords for authentication, access and/or transmission rights.

* * * In various embodiments, user register server 120 also may support one or more authentication technologies such as encrypted passwords, token based authentication and/or identity assertion.

’788 Patent at 3:56–64 & 4:14–16.

Secure service router 220 may be implemented to interface with an authorization module. Such as a user registry, to review access and transmission rights of data source system A 104. In one embodiment, secure service router 220 may be implemented as an authentication and authorization module configured to verify identity of data source system A 104.

’788 Patent at 6:39–44; *see id.* at 9:58–61 (“secure service router 220 may invoke additional authentication and authorization routines to verify access and transmission rights of data source system A 104”).

The specification thus discusses authentication and authorization broadly and does not support USAA’s proposal of limiting this disputed term to “using information contained in the header parameter(s).” Disclosure of, for example, “verif[y]ing access and transmission rights of data source system A 104 using SOURCE header parameter” (’786 Patent at 9:59–61), pertains to specific features of particular disclosed embodiments that should not be imported into the claims. *See Phillips*, 415 F.3d at 1323.

As to USAA’s proposal of requiring determining “if the data source system has permission to send messages to the external system,” this proposal gives effect to the requirement of verifying

“transmission rights” of the data source system. As to USAA’s proposal of requiring determining “whether the external system has permission to receive messages from the data source,” this proposal gives effect to the requirement of verifying “access” rights of the external system. Disclosures cited by PNC, such as regarding usernames and passwords, do not compel otherwise. *See* ’788 Patent at 4:16–20 & 6:47–67. Also, the requirement of determining whether the external system has permission to receive messages from the data source is necessary for the entirety of the term “verifying access and transmission rights of the data source system and the external system” to have meaning in above-reproduced Claim 1 because the claim recites only that a message is “to be transmitted to an external system” (not that the external system will itself seek access to the data source system).

The Court therefore hereby construes **“verifying access and transmission rights of the data source system and the external system”** to mean **“determining whether the data source has permission to send messages to the external system and whether the external system has permission to receive messages from the data source.”**

24. “secure service router”

<p>“secure service router” (’788 Patent, Claims 1, 3, 5; ’786 Patent, Claims 1, 2, 7)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>“component that authenticates the data source system, locates a service, and forwards a message or request to the service”¹</p>	<p>No further construction necessary.</p>

¹ PNC previously proposed: “component that authenticates *and authorizes* the data source system, locates a service, and forwards a message or request to the service.” (Dkt. No. 170, Ex. B, at 11 & 12.)

(Dkt. No. 170, Ex. B, at 11 & 12; Dkt. No. 196, at 7; Dkt. No. 226, Ex. A, at 66.)

(a) The Parties' Positions

PNC argues that “[t]he ‘secure service router’ is a specialized component of the claimed inventions that does not have an established meaning in the art, but rather is best understood through the specification.” (Dkt. No. 196, at 7 (citation omitted).) PNC further argues:

[T]he ’788 and ’786 patents do not use the word “router” to mean a component for packet routing. Rather, as discussed below, the specification describes the “secure service router” as operating at the application level to provide security by authenticating other components, and routing or forwarding messages or requests to the appropriate “service” or software component – hence, “secure service router.” *See, e.g.,* ’788 Pat. Abstract; 1:56–60. This departure from the conventional meaning of “router” underscores the need for a construction of this term.

(Dkt. No. 196, at 8.) PNC asserts that “the specification makes clear that a ‘service router’ is a component that locates a service, and forwards a message or request to that service.” (*Id.*, at 9.) “In addition, what sets apart the ‘secure’ service router from other disclosed service routers is that it has a specific security role, namely, authenticating the data source system.” (*Id.*)

USAA responds that “[t]he functionality of the claimed ‘secure service router’ is clear from the context of the claims,” and “PNC’s proposal seeks to improperly import functionalities that are expressly recited in some, but not all, of the claims.” (Dkt. No. 213, at 7.) USAA also argues that “[t]he specification is clear that these are optional, not mandatory.” (*Id.*, at 8.)

PNC replies that “[t]here is no dispute that the term ‘secure service router’ has no established meaning in the art and therefore requires a construction consistent with its usage in the intrinsic evidence.” (Dkt. No. 214, at 3.) PNC also argues: “[PNC’s] construction only recites three functions: ‘authenticating,’ ‘locating,’ and ‘forwarding,’ leaving room for the web services hub to perform the separate tasks of ‘identifying’ and ‘transforming.’ Moreover, that certain claims recite additional requirements for the secure service router beyond (but not in conflict with)

those recited in PNC's proposed construction (*e.g.*, claim 12's requirement to 'receive a message from a data source system,' 'determine the message type,' etc.) is entirely consistent with PNC's position that the secure service router performs 'authenticating,' 'locating,' and 'forwarding.'" (*Id.*, at 4.)

(b) Analysis

PNC persuasively argues that this disputed term in the '788 Patent and the '786 Patent uses the word "router" in a different context than the word is ordinarily used in the relevant art. That is, this "router" is not a well-known device for routing packets on a data network.

Instead, Claim 1 of the '786 Patent recites a "secure service router" that is to "authenticate the data source system prior to the transformed request being sent to the external system." The specification further informs the meaning of "secure" in this context by referring to secure service routers as verifying authentication. *See, e.g.*, '788 Patent at Abstract & 8:61–63.

As another example, Claim 7 of the '786 Patent recites that "the secure service router is operative to authenticate the data source system and locate a transformation service to transform the request such that the request is transformed by the transformation service via a transformation process comprising: transforming the request such that the transformed request is in a format that is understandable and processable by an external system."

As a further example, Claim 12 of the '788 Patent recites that a "secure service router" is to "receive a message from a data source system," "determine the message type," "verify access and transmission rights of the data source system and the external system," and "transmit the message."

The Abstract of the '788 Patent states: "The secure service router authenticates the data source system and locates a transformation service to transform the request." The Summary

section of the specification likewise states: “A secure service router coupled to the web services hub authenticates the data source system and locates a transformation service to transform the request.” ’788 Patent at 1:56–59. The specification further discloses a secure service router may locate a particular service that is capable of handling a particular request:

Based on the URL, asynchronous service router 214 or synchronous service router 216 may forward the message or request to secure service router 220. Secure service router 220 authenticates and authorizes data source system A 104 based on metadata and other information contained in the message or request. In one embodiment, asynchronous service router 214’ may return an HTTP 200 status code to data source system A 104 to acknowledge receipt of an asynchronously transmitted message or request by a handler such as, for example a JAVA message service (JMS) provider. *Secure service router 220 may then forward the message or request to transformation and/or business logic module 212.*

Id. at 8:1–12 (emphasis added)

Secure service router 220 may further locate a transformation service or business services handler capable of handling request 301. In one embodiment, secure service router 220 may forward transformed request 301 to a web transmitter 228 for transmission to external system 213. In another embodiment, web transmitter 228 may sign and encrypt request 301 employing second keystore 328. In various embodiments, transmission to external system 213 is established over secure request/response transmission channel 324 by a secure communications protocol such as SOAP over HTTPS.

Id. at 11:57–67 (emphasis added).

Nonetheless, because Claim 1 of the ’786 Patent recites that the “web services hub” “identif[ies] a business service handler configured to transform the request,” PNC’s proposal of “locates a service, and forwards a message or request to the service” should not be included in the construction of “secure service router.” That is, although the specification suggests that a secure service router could include such functionality in some implementations, Claim 1 of the ’786 Patent demonstrates that such functionality is not essential for a “secure service router” as claimed. Also of note, the specification discloses other types of service routers. *See id.* at Fig. 2 (illustrating “asynchronous service router” and “synchronous service router” interacting with “secure service

router”); *see also id.* at 6:17–24 (“In one embodiment, asynchronous service router 214 may be configured to locate and invoke business services capable of handling incoming requests or messages from data source system A 104). Additional disclosures cited by PNC do not compel any narrower construction but instead focus on authentication and authorization. *See* ’788 Patent at 6:42–44, 8:3–4, 8:61–63, 9:46–50, 9:58–61 & 11:53–56; *see also Phillips*, 415 F.3d at 1323.

The Court therefore hereby construes “**secure service router**” to mean “**service router than can verify authentication and authorization.**”

25. “message transformation logic module / transforming the message / response transformer / transforming the response” and “transforming the request / transform the response / transforming . . . the response”

<p>“message transformation logic module” (’788 Patent, Claims 1, 7, 8, 9)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“module that converts a message from one format to another without altering the content”</p>
<p>“transforming the message” (’788 Patent, Claims 1, 7, 8, 9)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No further construction necessary.</p>	<p>“converting the message from one format to another format without altering the content”</p>
<p>“response transformer” (’788 Patent, Claims 1, 7, 8, 9)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No additional construction is necessary at this time.</p>	<p>“module that converts a response from one format to another without altering the content”</p>

“transforming the response” (’788 Patent, Claims 1, 7, 8, 9)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No additional construction is necessary at this time.	“converting the response from one format to another format without altering the content”
“transforming the request” (’786 Patent, Claims 1, 3, 7, 8, 12)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction necessary	“converting the request from one format to another format without altering the content”
“transform the response” (’786 Patent, Claims 1, 3, 7, 8, 12) “transforming . . . the response” (’786 Patent, Claims 1, 3, 7, 8, 12)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No additional construction is necessary at this time.	“converting the response from one format to another format without altering the content”

(Dkt. No. 170, Ex. B, at 11–12; Dkt. No. 226, Ex. A, at 68 & 70.)

(a) The Parties’ Positions

PNC argues that USAA’s proposals should be rejected because “the ordinary meaning of ‘transform’ – to change – does not specifically require changing a format and does not preclude altering the content.” (Dkt. No. 196, at 10.) PNC submits that “some claims expressly require a format change, while others do not,” and “[t]he specification contemplates adding ‘digital credentials,’ which does not require a format change, but does require additional content—namely,

the digital credentials themselves. (*Id.*, at 10 & 12 (citation omitted).) Further, PNC argues that the prosecution history and extrinsic evidence cited by USAA do not demonstrate any special technical meaning for “transform” in the context here at issue. (*See id.*, at 12–14.) PNC concludes that “[i]n the absence of an established specialized meaning in the art, ‘transform’ should be given its ordinary meaning such as that found in standard dictionaries of the English language.” (*Id.*, at 14 (citation omitted).)

USAA responds that “USAA’s construction clarifies what ‘transforming’ is and individual claims specify what is being transformed and into what format it is transformed.” (Dkt. No. 213, at 10.) USAA also responds: “PNC next argues that the specification describes transformations involving altering the content of messages, but none of its cited examples support the argument.” (*Id.*) “Finally,” USAA argues that “USAA’s proposed construction is supported by the prosecution history, which confirms that the Applicants interpreted ‘transform’ to mean changing format, rather than altering content, and formed the basis of Applicants’ distinction of prior art.” (*Id.*, at 11.) USAA argues that “Applicants chose to distinguish [the] Christensen [reference] by repeatedly emphasizing the fact that Christensen alters the content of the message, rather than its format (consistent with USAA’s proposed construction)” (*Id.*, at 12.)

PNC replies that “‘transform’ has a plain and ordinary meaning—to change—that does not require a construction.” (Dkt. No. 214, at 4.) PNC also argues that the prosecution history cited by USAA contains no clear and unmistakable disclaimer and does not support USAA’s proposed construction. (*Id.*, at 5.)

At the November 10, 2021 hearing, PNC reiterated its argument that “transformation” could refer to changing content without changing format. USAA argued that a digital signature does not alter content but rather is intended to verify that content has *not* been altered.

(b) Analysis

Claim 1 of the '788 Patent, for example, recites (emphasis added):

1. A method, comprising:

receiving a message from a data source system, the message comprising at least one header parameter stored in at least one header parameter field, the message to be transmitted to an external system;

determining the message type based on the at least one header parameter;

verifying access and transmission rights of the data source system and the external system; and

transmitting the message to a *message transformation logic module*;

receiving the *message to be transformed* from the data source system at the *message transformation logic module* from a secure service router, the message comprising the at least one header parameter stored in the at least one header parameter field.

Claim 1 of the '786 Patent, as another example, recites (emphasis added):

1. A system, comprising:

a web services hub comprised of hardware, the hardware comprising at least one non-transitory memory connected to at least one processor, the web services hub configured to receive a request from a data source system that is external to the web services hub; *transform the request* into a transformed request, and transmit the transformed request to an external system, the request to be transformed by the web services hub into the transformed request by a process comprising:

the web services hub evaluating the data source system

identified in the request as being a source of the request,

the web services hub identifying a business service handler configured to *transform the request*,

the web services hub transforming the request via the business service handler such that the transformed request is in a format that is understandable and processable by the external system; and

the web services hub to receive a response to the transformed request from the external system after the external system has completed processing of the transformed request and transmitted a response to the transformed request, the web services hub to parse the response to the transformed request for the data source system and *transform the response* to the transformed request into a transformed response to send to the data source system such that the transformed response is understandable and processable by the data source system;

a secure service router coupled to the web services hub, the secure service router to authenticate the data source system prior to the transformed request being sent to the external system.

This recital of “the web services hub transforming the request via the business service handler such that the transformed request is in a *format* that is understandable and processable by the external system” suggests that “transform” can refer to changing a format. *See* ’786 Patent at 8:24–29 (“request transformer 224 may perform conversion from data source system A 104 format to another format recognizable by external system 213”).

Claim 9 of the ’788 Patent, as another example, recites “transforming the response to a *format* recognizable by the data source system,” again using the term “transform” in relation to a change of format.

But because Claim 1 of the ’788 Patent (reproduced above) and Claim 7 (from which Claim 9 ultimately depends) recite “to be transformed” and “transforming” without any reference to format, the claims weigh against USAA’s proposal that “transform” requires changing format. *Cf. Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1347 (Fed. Cir. 2009) (“when the inventor wanted to restrict the claims to require the use of a key, he did so explicitly”).

Also, the specification discloses applying additional security features to a message, which would not necessarily involve a format change, and an “intermediary transformation service” can be used to “assign appropriate security controls to messages.” ’788 Patent at 1:30–50.

In light of this context provided by the claims and the specification, USAA does *not* persuasively show that “transforming” *requires* changing a format. Also, the extrinsic dictionary definitions submitted by both sides confirm the broad meaning of “transforming.” (*See* Dkt. No. 196, Ex. A, *American Heritage Dictionary* 1832 (4th ed. 2006) (“transform: 1. To change markedly the appearance or form of ... 2. To change the nature, function, or condition of; convert.”); *see also id.*, Ex. B, *McGraw-Hill Dictionary of Scientific and Technical Terms* 2175 (6th ed. 2003) (“To change the form of digital computer information without significantly altering

its meaning”); *id.*, Ex. C, *Dictionary of Science and Technology* 614 (2d ed. 2007) (“to change the structure or appearance of something”).)

As to whether “transforming” requires changing the *content*, on one hand the specification discloses that “additional security controls may be imposed on the messages *without altering their form* to prevent disclosure to third parties.” ’786 Patent at 2:52–54 (emphasis added). Also, as to PNC’s reliance on disclosure regarding “clear text” username and password, which PNC argues necessarily must be removed or encrypted before transmission, the specification sets forth no disclosure of removing or encrypting such content. *See* ’788 Patent at 6:42–47 & 9:15–35.

On the other hand, as noted above the specification discloses that an “intermediary transformation service” can be used to “assign appropriate security controls to messages.” ’788 Patent at 1:30–50. The specification also refers to adding “digital credentials.” *Id.* at 2:48–51. Another portion of the specification refers to a digital signature. *Id.* at 11:43–43 (“first keystore 308 may assign a public or private encryption key digital signature to request 301”); *see id.* at 11:61–12:4 (“Secure service router 220 may further locate a transformation service or business services handler capable of handling request 301. In one embodiment, secure service router 220 may forward transformed request 301 to a web transmitter 228 for transmission to external system 213. In another embodiment, web transmitter 228 may sign and encrypt request 301 employing second keystore 328.”); *see also id.* at Fig. 4.

A fair reading of these disclosures is that such transformations could involve altering content. Moreover, even if the specification were interpreted as containing no examples of transformation that involves altering content, USAA does not persuasively justify limiting the “transforming” terms so as to *preclude* altering content. *See Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012) (“The patentee is free to choose a broad term and

expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.”).

The parties, in their briefing, also discuss the Court’s analysis in *RMail Ltd. v. Amazon.com, Inc.*, No. 2:10-CV-258-JRG, 2013 WL 968246, at *55–*58 (E.D. Tex. Mar. 12, 2013). For example, the parties cite disclosure in the specification of one of the patents that was at issue in *Rmail*. *See id.*, at *57 (“To verify the message, in step 1001 the system detaches and decrypts the document digital signature appended to the message. . . . If the document hash(es) matches the decrypted hash(es), then the message and its attachments must have passed through the system and have not been altered since their delivery to the recipient.”). The Court’s analysis of a “digital signature” in that case is not significantly probative as to the proper construction of the “transforming” terms in the present case. *See e.Digital Corp. v. Futurewei Techs., Inc.*, 772 F.3d 723, 727 (Fed. Cir. 2014) (“claims of unrelated patents must be construed separately”).

Turning to the prosecution history, during prosecution of the ’786 Patent the patentee distinguished the “Christensen” reference (United States Patent No. 7,761,484), arguing as follows:

. . . Christensen et al. is merely directed to a data manipulation process for use in mapping XML messages. (Christensen et al., at Col. 2, lines 58–65). The mapping facilitates using serialization stacks for use with XML messages with dynamic language data expressions expressed as XML messages. *Id.* Christensen et al. disclose that data from an XML message is handled to remove information from that message. A response to that message may then be sent in the format of the XML message. *There is no disclosure of any transformation of any message for sending to another system so that this other system can process or understand that message.* To the contrary, Christensen et al.’s system is configured to receive data in XML format, remove data from that message to process that data, and then send a response to the XML message in XML format. (Christensen et al., at Col. 3, line 38 to Col 4, line 46).

* * *

Christensen does not transform the message for sending to “another system” analogous to the “external system,” but rather sends a response directly back to the data source.

* * *

The Office Action only relies upon Christensen et al. to suggest any transformation of data. But, *Christensen et al.* is merely directed to a device extracting data from an XML file for processing that data and subsequently sending data in an XML format. There is no disclosure or suggestion to provide any transformation of a request for sending to an external system, receiving a response to that request from the external system, parsing that response, transforming the response, and sending the transformed response to the data source that sent the request. The cited combination of art is silent with respect to such features.

(Dkt. No. 213, Ex. 9, May 30, 2014 Response to Office Action, at 12, 13 & 15 (pp. 21, 22 & 24 of 37 of Ex. 9) (emphasis added).) The examiner subsequently allowed the claims. (*See id.*, June 23, 2014 Notice of Allowability (pp. 7–9 of 37 of Ex. 9).)

USAA also submits that Christensen discloses: “To allow the first entity 102 and second entity 104 to communicate, the first entity 102 and second entity 104 may be implemented in a framework which allows for the translation of one data format to another data format.” (*See* Dkt. No. 213, Ex. 10, Christensen at 3:33–37.)

In this above-reproduced prosecution history, however, the patentee distinguished Christensen as merely extracting data and therefore lacking *any* transformation. Thus, no definition or disclaimer is apparent that would support USAA’s proposal to limit the “transforming” terms to a particular type of transforming, namely so as to require converting a message from one format to another without altering the content. *See Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on *definitive* statements made during prosecution.”) (emphasis added).

Finally, particularly at the November 10, 2021 hearing, USAA relied on disclosure and inventor testimony regarding “transformation logic” and “business logic.” ’788 Patent at 10:15–24. Inventor testimony, however, is of little if any relevance in these claim construction proceedings. *See Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1346–47 (Fed. Cir. 2008) (noting that inventor testimony is “limited by the fact that an inventor understands the invention but may not understand the claims, which are typically drafted by the attorney prosecuting the patent application”).

The Court therefore hereby expressly rejects USAA’s proposed constructions. Also, to whatever extent a dispute remains as to whether “transforming” necessarily involves altering content, the Court expressly finds that transforming may or may not involve altering content.

No further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**message transformation logic module / transforming the message / response transformer / transforming the response**” and “**transforming the request / transform the response / transforming . . . the response**” to have its **plain meaning**.

26. “second keystore coupled to the web server”

<p>“second keystore coupled to the web server” (’786 Patent, Claims 5, 10)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No additional construction is necessary at this time. Not indefinite.</p>	<p>Indefinite.</p>

(Dkt. No. 170, Ex. B, at 12; Dkt. No. 226, Ex. A, at 71.)

(a) The Parties' Positions

PNC argues that “[i]t is apparent that the first and second keystores correspond to two different keystores disclosed in the specification that serve different functions,” and “[t]he two keystores are not functionally related, but rather, operate independently of one another and serve different purposes.” (Dkt. No. 196, at 15.) PNC thus argues that “Claim 5 recites only a single keystore, and therefore, a POSA would have understood that it only requires a single keystore.” (*Id.*, at 16.)

USAA argues that “[n]either claims 5 and 10, nor the claims that they depend from, recite a ‘first keystore,’” and “PNC does not contend[] that any meaning for ‘second’ in this context can be discerned from the intrinsic record.” (Dkt. No. 213, at 13.)

PNC replies that “[a]s PNC previously explained, a POSA would have understood the use of the term ‘second’ distinguishes the ‘second keystore’ of Claims 5 and 10 from the functionally distinct ‘first keystore’ of Claims 3 and 8.” (Dkt. No. 214, at 5 (citation omitted).)

(b) Analysis

PNC persuasively argues that “a POSA would have understood that the claim language means exactly what it says: claims 3 and 8 require a keystore coupled to the web transmitter (the ‘first keystore’), and claims 5 and 10 require another keystore coupled to the web server (the ‘second keystore’), but do not require the first keystore.” (Dkt. No. 196, at 14; *see* ’786 Patent at 11:51–12:7 & Fig. 4 (illustrating “first keystore 408” and “second keystore 428”).)

Defendants do not meet their burden to show that the claim fails to “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129; *see Sonix*, 844 F.3d at 1377. Because these claims recite only a single keystore, Defendants do

not persuasively show that the use of the word “second” would give rise to any confusion as to whether another (“first”) keystore is also required. Defendants present no alternative proposed construction.

The Court therefore hereby construes **“second keystore coupled to the web server”** to have its **plain meaning**.

27. “bar”

<p>“bar” (’754 Patent, Claims 1, 2, 4, 15)</p>	
<p>PNC’s Proposed Construction</p>	<p>USAA’s Proposed Construction</p>
<p>No further construction needed.</p>	<p>“rectangular-shaped object”</p>

(Dkt. No. 170, Ex. B, at 13; Dkt. No. 226, Ex. A, at 73.)

(a) The Parties’ Positions

PNC argues: “A jury is capable of applying the ordinary meaning of the word ‘bar’ without further construction. USAA’s construction excludes the disclosed embodiments, is unsupported by the dictionaries USAA relies on, and is contradicted by the prosecution history.” (Dkt. No. 196, at 18.) PNC urges that in the prosecution history relied upon by USAA, “nothing in Applicants’ argument purports to limit a ‘bar’ to a rectangle or disavow . . . any shape for a ‘bar’ other than a rectangle.” (*Id.*, at 20.)

USAA responds: (1) “the specification expressly distinguishes ‘bars’ (the claimed embodiment) from other potential ways to graph information, such as line graphs or use of different shapes”; (2) “all illustrated embodiments are rectangular-shaped”; (3) “the claims explain that the ‘bar’ must be capable [of] being placed ‘within’ another ‘bar’ and displayed in parallel”; (4) “during prosecution PNC expressly disavowed its current, open-ended interpretation”; and (5)

“extrinsic dictionaries further support that ‘bars,’ in the context of a bar graph, are rectangular-shaped objects.” (Dkt. No. 213, at 14–15.)

PNC replies: “USAA falls short of identifying any ‘clear and unmistakable’ disclaimer of claim scope during prosecution. There is no dispute that the Applicants never referred to rectangles, let alone limited ‘bar’ to rectangular shapes.” (Dkt. No. 214, at 6.) PNC also argues that “USAA’s own dictionary definitions cut against its proposed definition of ‘bar.’” (*Id.*) Further, PNC submits: “USAA argues (at D.I. 213 at 15) that the disclosed embodiments are ‘rectangular in nature,’ ignoring the pill shape of the illustrated ‘bars,’” and “the shapes [in the patent figures] are no closer to rectangles than ovals.” (Dkt. No. 214, at 6.)

At the November 10, 2021 hearing, PNC argued that the claims set forth requirements for a “bar” in the claim language itself. USAA responded that whereas the specification contemplates many different ways to graph income and spending, the patentee chose to recite a “bar,” which USAA argued has a particular meaning. PNC suggested that a “bar” is simply a shape that can have a dimension altered to indicate a value, and PNC argued that the specification distinguishes lines and circles because a line cannot be within another line and because the size of a circle cannot be altered in only one dimension.

(b) Analysis

Claim 1 of the ’754 Patent, for example, recites (emphasis added):

1. A computer implemented method of tracking customer spending and income, the method comprising:
 - aggregating spending transactions by a customer during a first time period;
 - estimating income to the customer during the first time period; and
 - displaying a user interface to the customer, wherein the user interface comprises:
 - a first *bar*, wherein *a dimension* of the first *bar* is proportional to the estimated income to the customer during the first time period; and

a second *bar*, wherein *a dimension* of the second *bar* is proportional to the aggregate spending transactions by the customer during the first time period, wherein the second *bar* is positioned *within* the first *bar*, and wherein *the dimension* of the first *bar* is *parallel* to *the dimension* of the second *bar*.

Figure 4 of the '754 Patent, for example, is reproduced here:

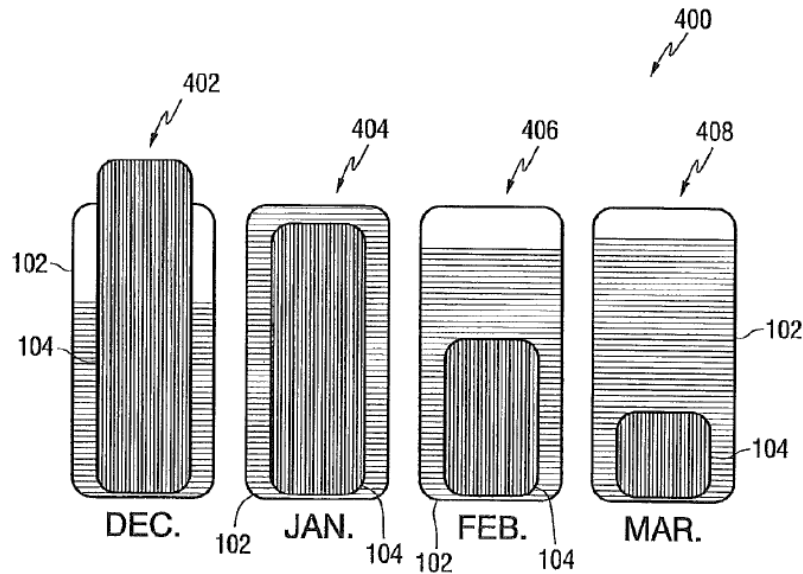


FIG. 4

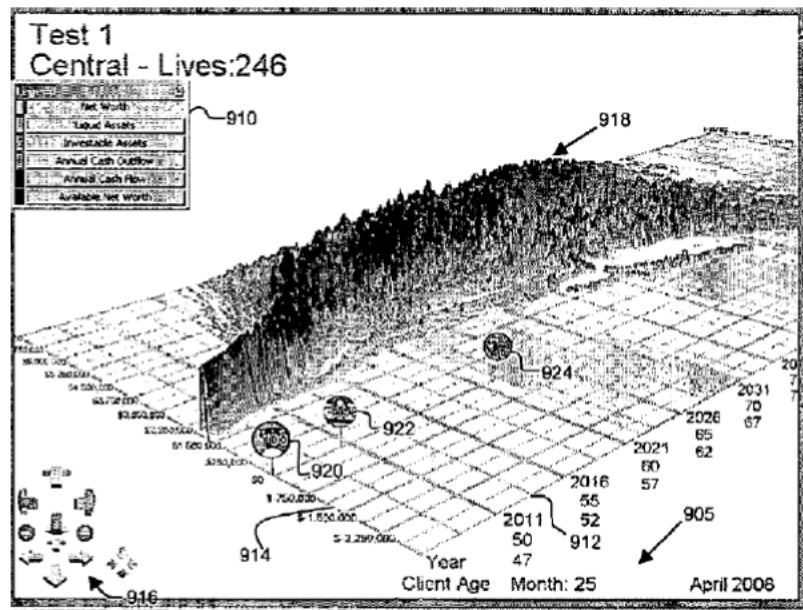
Although each illustrated “bar” is predominantly defined by two pairs of parallel edges, and although these pairs of edges appear to be situated perpendicular to one another in a rectangular fashion, “patent coverage is not necessarily limited to inventions that look like the ones in the figures.” *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 415 F.3d 1323, 1333 (Fed. Cir. 2007) (citation omitted). Further, the curved corners of the shapes shown in above-reproduced Figure 4 weigh against construing “bar” as being “rectangular.”

USAA cites disclosure in the specification regarding “suitable shape[s]”:

[A]lthough income and spending bars are described, it will be appreciated that any other suitable shape or pattern may be substituted (e.g., a line, a dashed line, a circle, etc.).

'754 Patent at 7:14–17. Although this disclosure distinguishes “bars” from a “line,” a “dashed line,” and a “circle,” this does not demonstrate that a “bar” must necessarily be rectangular.

As to the prosecution history, USAA cites the patentee’s arguments (during prosecution of a parent of the '754 Patent) distinguishing the “Harris” reference (U.S. Patent Publication No. 2007/0239572) as being a topographic chart that did not include any bars. Figure 32 of Harris, discussed by this prosecution history, is reproduced here:



(Dkt. No. 196, Ex. E, Harris at Fig. 32.)

In this figure, axis 912 represents years, axis 914 represents a financial variable such as “net worth,” and the height of the chart on the z-axis at a particular point represents the probability that the financial variable will have the value indicated at that point in time. (*Id.* at [0068]) (“The height (or depth) of any particular point on the topographical chart indicates the number, or percentage, of simulations where the displayed financial variable (e.g., net worth) took the value and time (e.g., \$1.5 million in 2021) of the corresponding coordinate set on axes 912, 914. Thus, in one embodiment, peaks on the topographical chart 918 represent outcomes with relatively high

probability and topographical points below the peaks (including valleys) represent outcomes with relatively lower probabilities.”.)

The examiner cited Harris, asserting that “the height or depth of any point on the chart is plotted as value over time, such that each point mapped is essentially a first bar, second bar, etc.” (Dkt. No. 196, Ex. D, Oct. 1, 2010 Office Action, at 3.)

The patentee responded:

The chart shown in Harris at Fig. 32 and described in paragraph 0068 is a topographical chart that includes no bars but instead represents the probability of certain outcomes as functions of time and dollar values.

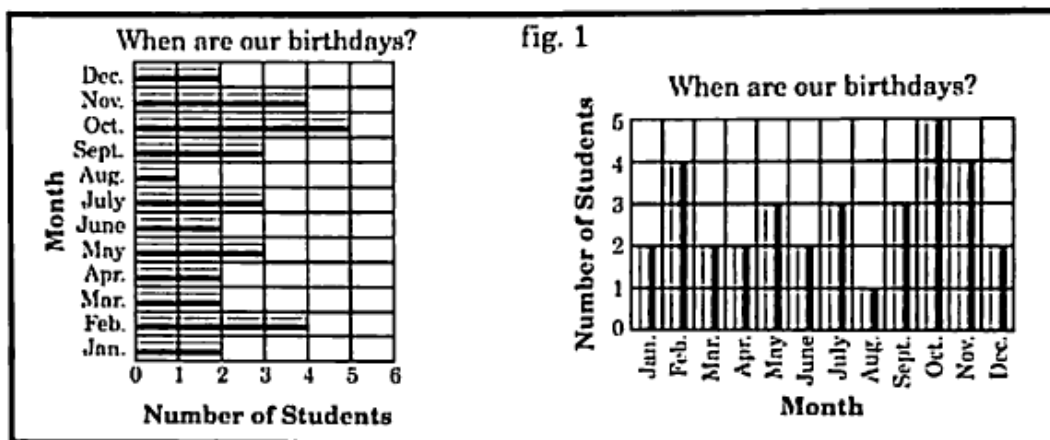
(*Id.*, Ex. F, July 29, 2011 Response to Office Action, at 9.)

Also, during prosecution of the subsequent continuation application, the patentee reiterated that “Harris does not teach ‘a first bar’ and ‘a second bar’ as claimed in the instant application,” and “the cited passages of Harris (*i.e.*, Fig. 32 and paragraph 0068), describe and illustrate a topographical chart that does not include any bars.” (Dkt. No. 196, Ex. J, June 22, 2012 Preliminary Amendment, at 9.)

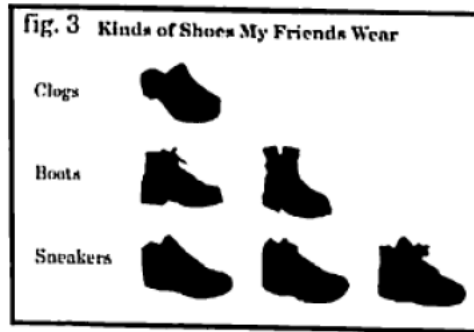
USAA does not persuasively show that the above-discussed prosecution history gives rise to a definition or disclaimer that confines the meaning of “bar” to a “rectangular” shape. First, at least based on the documents that the parties have submitted to this Court, the topographical chart from Harris resembles a topographical map having a raised surface rather than a series of shapes emanating from a base axis or plane. Thus, rather than limiting bars to particular shapes, the patentee distinguished Harris as not disclosing any bars at all. At the November 10, 2021 hearing, PNC also noted that the values illustrated in Harris could not be adjusted without affecting surrounding parts of the illustrated shape, which PNC argued is different from a bar graph. Second, the patentee distinguished Harris not on the basis of shape but rather on the basis that the heights

in Harris represented probability, not an amount of money. USAA therefore does not persuasively show any relevant definitive statements that would warrant limiting the term “bar” to a rectangular shape. *See Omega Eng’g*, 334 F.3d at 1324 (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on *definitive* statements made during prosecution.”) (emphasis added). Moreover, to whatever extent this prosecution history is subject to interpretation in USAA’s favor, the presence of multiple reasonable interpretations weighs against finding any definitive statement that would warrant imposing the limitation proposed by USAA. *See Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004) (“Because the statements in the prosecution history are subject to multiple reasonable interpretations, they do not constitute a clear and unmistakable departure from the ordinary meaning of the term”) (citation omitted).

As to extrinsic evidence, the *Math Dictionary* cited by both sides in their claim construction disclosures (*see* Dkt. No. 170, Ex. C, at 46; *see also id.*, Ex. D, at 38) explains as follows: “A bar graph (fig. 1) is a kind of graph that we use to compare categories or groups of information. Bar graphs are usually formed with rectangular bars, arranged either vertically or horizontally, to show information. They can also be formed with real objects, pictures, or symbols.” (Dkt. No. 196, Ex. I, *Math Dictionary* 12 (2006).) Figures 1 and 3 from the *Math Dictionary* are reproduced here:



real graph
A real graph (fig. 3)
is a kind of bar graph
that displays the real
objects being graphed.



(*Id.*)

This evidence that “bar graphs” are “*usually* formed with rectangular bars” reinforces that “bar” in this context has a broad meaning that is not limited to rectangular shapes. (*Id.*) At the November 10, 2021 hearing, USAA noted that the cited *Math Dictionary* is subtitled, “The Easy, Simple, Fun Guide to Help Math Phobics Become Math Lovers,” and USAA argued that this dictionary should therefore be given little weight in the Court’s analysis of the technical question here at hand. But regardless of the level of mathematical sophistication to which the *Math Dictionary* may be directed, this is unbiased evidence of the meaning of “bar graph” that the Court can take into consideration. *See Phillips*, 415 F.3d at 1318 (“Because dictionaries, and especially technical dictionaries, endeavor to collect the accepted meanings of terms used in various fields of science and technology, those resources have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology to those of skill in the art of the invention.”) (citation omitted).

The other extrinsic dictionaries cited by USAA do not compel otherwise. (*See* Dkt. No. 213, Ex. 6, *McGraw Hill Dictionary of Scientific and Technical Terms* 200 (6th ed. 2003) (defining “bar graph” as: “A diagram of frequency-table data in which a rectangle with height proportional to the frequency is located at each value of a variate that takes only certain discrete values. Also known as bar chart; rectangular graph.”); *see also id.*, Ex. 13, *Dictionary of Computer and Internet*

Terms 44–45 (9th ed. 2006) (defining “bar graph” as “a type of chart that displays information by representing quantities as rectangular bars of different heights”); *id.*, Ex. 14, *Wiley Electrical and Electronics Engineering Dictionary* 60 (2004) (defining “bar graph” as: “A graphical representation in which data is presented as rectangular bars. These bars may be horizontal or vertical, and may be in solid colors or patterns to display information more clearly.”); *id.*, Ex. 15, *The American Heritage Dictionary of the English Language* 145 (4th ed. 2006) (defining “bar graph” as: “A graph consisting of parallel, usually vertical bars or rectangles with lengths proportional to the frequency with which specified quantities occur in a set of data.”); *id.*, Ex. 21, *Collins Dictionary of Mathematics* 42–43 (2nd ed. 2005) (defining “bar chart or bar graph” as: “a diagram consisting of a sequence of vertical or horizontal bars or rectangles . . .”).

Indeed, even one of these dictionaries cited by USAA refers to “rectangular bars” but then immediately thereafter states that “[s]ometimes *symbols are stacked* or stretched to the appropriate heights to lend some visual interest to the chart.” (*Id.*, Ex. 13, *Dictionary of Computer and Internet Terms* 44–45 (9th ed. 2006).)

Finally, USAA cites PNC’s arguments in opposition to a motion to dismiss based on 35 U.S.C. § 101, but USAA identifies nothing in PNC’s argument that would warrant confining the term “bar” to a rectangular shape, including as to PNC’s assertion that the ’754 Patent “does not purport to cover every possible display or even every possible graphical display of income and aggregated spending data, but rather claims a particular display with a highly specific structure” Dkt. No. 80 at 9; *see also id.* at 11 (referring to displaying information “in the specific, compact way required by the claims (i.e., with bars representing aggregated spending transactions positioned within bars representing estimated income)”). This does not warrant limiting “bar” to a rectangular shape.

The Court therefore hereby expressly rejects USAA’s proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

Nonetheless, and as noted above, the Court expressly finds that the specification definitively states that “lines,” “dashed lines,” and “circles” are not “bars.” ’754 Patent at 7:14–17 (“[A]lthough income and spending bars are described, it will be appreciated that any other suitable shape or pattern may be substituted (e.g., a line, a dashed line, a circle, etc.).”).

With that understanding, the Court hereby construes “bar” to have its **plain meaning**.

28. “wherein the second bar is positioned within the first bar,” “wherein the third bar is positioned within the fourth bar,” and “wherein the fifth bar is positioned within the sixth bar”

<p>“wherein the second bar is positioned within the first bar” “wherein the third bar is positioned within the fourth bar” “wherein the fifth bar is positioned within the sixth bar” (’754 Patent, Claims 1, 2, 4, 15)</p>	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction needed.	<p>“wherein the second bar is inside the first bar (i.e., the width of the second bar is narrower than the width of the first bar)”</p> <p>“wherein the third bar is inside the fourth bar (i.e., the width of the third bar is narrower than the width of the fourth bar)”</p> <p>“wherein the fifth bar is inside the sixth bar (i.e., the width of the fifth bar is narrower than the width of the sixth bar)”</p>

(Dkt. No. 170, Ex. B, at 13; Dkt. No. 226, Ex. A, at 74.)

(a) The Parties' Positions

PNC argues that “[i]n this context, the ordinary meaning of ‘within’ is ‘at least partially inside.’” (Dkt. No. 196, at 21.) PNC urges that “the ordinary meaning of ‘within’ is not a narrower width, and there is no basis to alter the ordinary meaning here.” (*Id.*, at 22.)

USAA responds that “PNC’s ‘plain reading’ is grossly overbroad, and would encompass a situation where the second bar only touches or only slightly intrudes upon the first bar,” and “[t]o the contrary, the dictionaries consistently define ‘within’ as actually inside of something else.” (Dkt. No. 213, at 18.) USAA urges that “the claim language defines a second bar entirely inside a first bar.” (*Id.*, at 19.)

PNC replies that “the specification demonstrates that ‘within’ cannot mean ‘entirely inside’ or ‘narrower than the width of the first bar.’” (Dkt. No. 214, at 7.)

(b) Analysis

As a threshold matter, the parties cite decisions of the Federal Circuit and another court involving terms that included the word “within.” *See Motionless Keyboard Co. v. Microsoft Corp.*, 486 F.3d 1376, 1380 (Fed. Cir. 2007) (“cluster of keys forming a keyboard within said concavity”); *see also Duncan Parking Techs., Inc. v. IPS Grp., Inc.*, 914 F.3d 1347, 1363–64 (Fed. Cir. 2019); *Zen Design Grp. Ltd. v. Scholastic, Inc.*, 2018 WL 1750978, at *3–*4 (E.D. Mich. Apr. 11, 2018). The constructions of these different term in different patents are not significantly probative as to the proper construction of the terms here at issue in the present case. *See e.Digital*, 772 F.3d at 727 (“claims of unrelated patents must be construed separately”).

Claims 1 and 2 of the '754 Patent, for example, recite (emphasis added):

1. A computer implemented method of tracking customer spending and income, the method comprising:
 - aggregating spending transactions by a customer during a first time period;
 - estimating income to the customer during the first time period; and

displaying a user interface to the customer, wherein the user interface comprises:

- a first bar, wherein a dimension of the first bar is proportional to the estimated income to the customer during the first time period; and
- a second bar, wherein a dimension of the second bar is proportional to the aggregate spending transactions by the customer during the first time period, *wherein the second bar is positioned within the first bar*, and wherein the dimension of the first bar is parallel to the dimension of the second bar.

2. The method of claim 1, further comprising:

aggregating spending transactions by the customer during a second time period;

estimating income to the customer during the second time period; and wherein the user interface further comprises:

- a third bar, wherein a dimension of the third bar is proportional to the estimated income to the customer during the second time period; and
- a fourth bar, wherein a dimension of the fourth bar is proportional to the aggregate spending transactions by the customer during the second time period, *wherein the third bar is positioned within the fourth bar*, and wherein the dimension of the third bar is parallel to the dimension of the fourth bar.

Figure 4 of the '754 Patent, for example, is reproduced here:

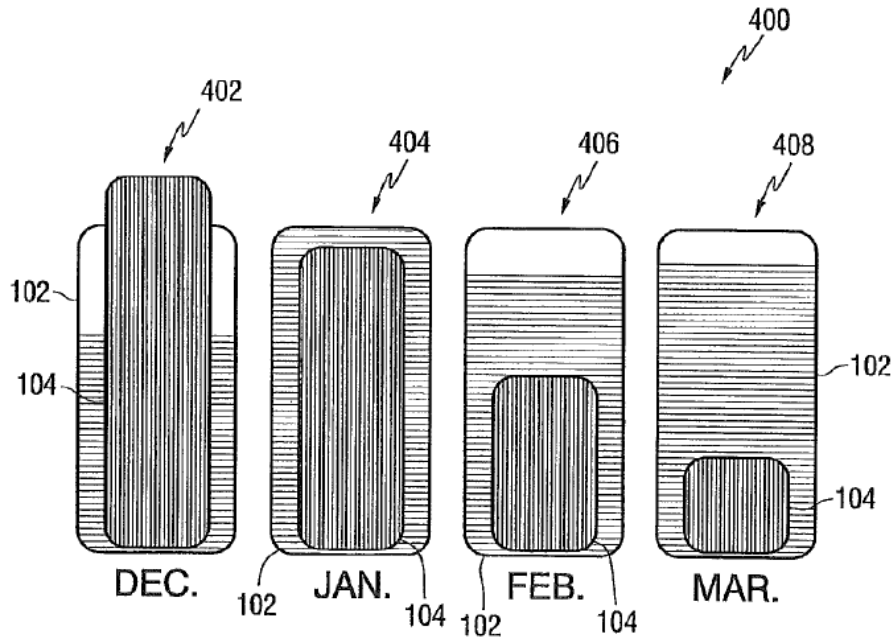


FIG. 4

Regarding this figure, the specification discloses:

FIG. 4 illustrates one embodiment of a user interface 400 including bar sets 402, 404, 406, 408 showing historical spending and income information for the customer. For example, each of the bar sets 402, 404, 406, 408 may include an income bar 102 and a spending bar 104, as described above. The time periods associated with one or more of the bars 402, 404, 406, 408 may be historical time periods that have elapsed. For example, each of the bar sets 402, 404, 406, 408 is associated with a past month. In this way, a customer may be able to view their historical spending versus income data.

'754 Patent at 3:15–25.

As further context, the specification also discloses:

According to various embodiments, the user interface may display multiple income and spending bar pairs simultaneously. *For example, each pair may correspond to a different time period.* A first pair may correspond to a current week, a second pair may correspond to a current month and a third pair may correspond to a current year. Also, in some embodiments the user interface may include one or more spending and income bar pairs corresponding to historical time periods.

FIG. 1 illustrates one embodiment of a user interface 100 for displaying customer spending and income for a single time period. The user interface 100 comprises an income bar 102 and a spending bar 104, which may show the relative relationship

between the customer's income and spending over the time period. For example, in FIG. 1, the spending bar 104 is lower than the income bar 102, indicating that the customer has spent less than their total income for the time period. FIG. 2, however, illustrates one embodiment of the user interface 100 with the spending bar 104 higher than the income bar 102, indicating that the customer has spent more than their total income for the time period. *According to various embodiments, the bars 102, 104 may be positioned within one another, as shown. For example, the spending bar may be positioned within the income bar 102.*

Id. at 2:11–33 (emphasis added).

At first blush, PNC's proposal that "[i]n this context, the ordinary meaning of 'within' is 'at least partially inside'" (Dkt. No. 196, at 21) seems to be consistent with Figure 4, for example, which as shown and described above includes a bar set 402 in which the narrower spending bar 104 is longer than its corresponding income bar 102. Thus, unlike for bar sets 404, 406, 408, the spending bar in bar set 402 is not entirely within the income bar.

The widths of these bars, however, is shown as being one particular width for all income bars 102 and a smaller width for all spending bars 104. In this illustrated embodiment, the widths of the spending bars 104 are all entirely within the widths of the income bars 102.

Nonetheless, USAA's proposed reference to "width" could introduce ambiguity, such as if for example a spending bar 104 had such a small magnitude that the horizontal dimension (horizontal as shown in Figure 4) became larger than the vertical dimension. In such a situation, confusion might arise as to whether the "width" then refers to the vertical dimension rather than the horizontal dimension. Also, the parties dispute what dimension would be the "width" if, for example, the bar sets shown in above-reproduced Figure 4 were rotated a quarter-turn. USAA argues that the "width" would not change, but PNC asserts that the "height" would become the "width." (See Dkt. No. 214, at 7.) The specification explains that the overall orientation of the bars may be changed and may illustrate "income and spending along other dimensions":

Although FIG. 1 shows the bars 102, 104 proportional to income and spending along the vertical dimension, various other embodiments may include bars proportional to income and spending along other dimensions including, for example, the horizontal dimension.

'754 Patent at 2:42–46.

On balance, a fair reading of the patentee's use of "within" in the context of these claims, informed by the illustrations in Figure 4 as well as Figures 1–3, and viewed in light of the accompanying descriptions in the specification such as those cited above, is that a second bar being positioned "within" a first bar means that at least one dimension of the second bar is entirely within a corresponding dimension of the first bar.

Finally, this is also consistent with the extrinsic dictionary definitions of "within" submitted by USAA. (*See* Dkt. No. 213, Ex. 8, *Concise Oxford English Dictionary* (11th Ed. Rev. 2008)) ("inside (something)"); *see also id.*, Ex. 19, *Cambridge Learner's Dictionary* 806 (3rd Ed. 2007) ("inside an area, group or system" such as in the sentence "[t]here's a pharmacy within the hospital building"); *id.*, Ex. 20, *Collins Dictionary* 1869 (10th Ed. 2009) ("in; inside; enclosed or encased by").

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
"wherein the second bar is positioned within the first bar"	"wherein a dimension of the second bar is entirely within a corresponding dimension of the first bar"
"wherein the third bar is positioned within the fourth bar"	"wherein a dimension of the third bar is entirely within a corresponding dimension of the fourth bar"

“wherein the fifth bar is positioned within the sixth bar”	“wherein a dimension of the fifth bar is entirely within a corresponding dimension of the sixth bar”
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29. “estimating income to the customer during the first / second / third time period”

“estimating income to the customer during the first / second / third time period” (’754 Patent, Claims 1–3)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction needed.	“projecting what the customer’s income will be [during the first / second / third time period]”

(Dkt. No. 170, Ex. B, at 13; Dkt. No. 226, Ex. A, at 75.)

(a) The Parties’ Positions

PNC argues that “[t]he claims contemplate estimating a customer’s income for a particular period of time—without specifying whether that income is past or present.” (Dkt. No. 196, at 23 (citation omitted).) Also, PNC argues that “[t]he use of the word ‘estimate’ in the specification confirms that the word ‘estimate’ ordinarily has a broad meaning and is not limited to projecting future income.” (*Id.*)

USAA responds that construction is necessary because “PNC’s brief makes clear its intent to write the word ‘estimating’ out of the patent by reading the claims on simply collecting historical income data.” (Dkt. No. 213, at 20.) USAA also argues that “PNC improperly relies on portions of the specification referring simply to ‘income,’ as opposed to ‘estimated income.’” (*Id.*)

PNC replies, for example: “That historical data can be used to estimate income does not confine estimating income to present or future income. For example, historical data can be used

to estimate other historical time periods—e.g., a paycheck from a past week can be used to estimate the income from a past month.” (Dkt. No. 214, at 8.)

(b) Analysis

Claim 1 of the '754 Patent recites (emphasis added):

1. A computer implemented method of tracking customer spending and income, the method comprising:

aggregating spending transactions by a customer during a first time period; *estimating income to the customer during the first time period*; and displaying a user interface to the customer, wherein the user interface

comprises:

- a first bar, wherein a dimension of the first bar is proportional to the estimated income to the customer during the first time period; and
- a second bar, wherein a dimension of the second bar is proportional to the aggregate spending transactions by the customer during the first time period, wherein the second bar is positioned within the first bar, and wherein the dimension of the first bar is parallel to the dimension of the second bar.

The recital of “aggregating spending transactions by a customer,” on its face, can refer to transactions that have occurred in the past, and these are recited as being during the same “first time period” for which income is estimated. The limitation of “estimating income to the customer during the first time period” is therefore not limited to future income.

USAA emphasizes that the disputed term refers not just to “income” but rather to “estimated income,” and USAA argues that merely gathering historical data would not lead to an “estimate.” This argument is unpersuasive because the historical data might not encompass all applicable income. Such estimates can be readily imagined. *See, e.g.*, '754 Patent at 6:15–27 (quoted below). For example, average monthly income could be estimated based on only a selected few past deposits. *See id.*

USAA also cites disclosures in the specification:

For example, *present and future income* may be found by a pro rata division of the total estimated income to the customer during the time period. In this way, if the time period is one month, and two weeks of the month have elapsed, the *present income and the future income* may both be equal to half of the total *estimated income for the time period*.

* * *

At box 604, the system 10 may estimate income to the customer during the time period. Income may be estimated according to any suitable method. For example, the system 10 may track historical deposits (e.g., direct deposits of pay checks) to the customer's financial account and estimate periodic income accordingly. According to various embodiments, the system 10 may receive from the customer a periodic income amount. From this value, the system 10 may derive the customer's income for any suitable period. As described above, estimating income may comprise finding a present income and a future income, which may be found in any suitable way including, for example, those described above.

Id. at 2:61–67 & 6:15–27 (emphasis added).

These disclosures, however, do not demonstrate that “estimating income” is necessarily limited to future income, particularly in light of the above-reproduced disclosure of “track[ing] historical deposits” in relation to “estimat[ing] periodic income.” *Id.*

The Court therefore hereby expressly rejects USAA's proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**estimating income to the customer during the first / second / third time period**” to have its **plain meaning**.

30. “graphical banking interface”

“graphical banking interface” (’623 Patent, Claim 1)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction necessary	“an interface that allows users to schedule banking transactions using graphical operations, such as ‘dragging’ or ‘dropping’”

(Dkt. No. 170, Ex. B, at 14; Dkt. No. 226, Ex. A, at 77.)

(a) The Parties’ Positions

PNC argues:

The graphical banking interface should be given its plain meaning as an interface that is “graphical” and that can be used for banking transactions. USAA seeks to add a further limitation that it must be capable of scheduling transactions by “graphical operations, such as ‘dragging’ or ‘dropping.’” But the claim term requires only a graphical “interface,” not graphical “operations” and certainly not any particular graphical operations. USAA’s construction is also vague and confusing because it omits other examples of using a graphical banking interface to schedule transactions, such as pressing a button.

(Dkt. No. 196, at 24.)

USAA responds that “USAA’s construction tracks the intrinsic record, including the way that the file history and specification distinguish the supposedly novel ‘graphical banking interface’ of the ’623 Patent from prior art banking interfaces.” (Dkt. No. 213, at 21.) USAA submits that “each of the asserted claims is expressly limited to a ‘*graphical*’ user interface, not just any user interface.” (*Id.*, at 22.)

PNC replies that “[t]he full passage USAA relies on as an attempt to narrow ‘graphical banking interface’ makes clear that it is only discussing ‘various embodiments’ of the claimed

invention, *see* '623 Patent at 2:20–23, and not limiting the scope of the invention.” (Dkt. No. 214, at 8 (citation omitted).)

(b) Analysis

Claim 1 of the '623 Patent recites (emphasis added):

1. A computer-assisted method for facilitating financial savings, the method comprising:

accepting, using a processor, a funds transfer request by a user of an amount of funds between a funding account and at least one receiving account, wherein the funding account and the receiving account are separate accounts;

accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds;

transferring the amount of funds from the funding account to the at least one receiving account;

generating, using the processor, for display on a *graphical banking interface*, a graphical representation of the designation of the intended purpose of use of the amount of funds; and

transferring the amount of funds from the at least one receiving account to the funding account on the date of intended use.

The specification discloses using “graphical” operations:

Various embodiments of the present invention are directed to systems and methods that provide electronic banking tools and interfaces. The systems and methods, in various embodiments, allow users to change payment dates of bills by way of *graphical* operation (e.g., by “dragging” and “dropping” a scheduled payment). Various embodiments alert a user when an available account balance drops below a certain threshold. Various embodiments allow for real time population of payment items on a calendar and allow for daily, weekly, monthly and yearly calendar views of past and future account activity.

'623 Patent at 2:18–27 (emphasis added); *see id.* at 4:22–24 (“a scheduled item 56 is moved to an adjacent day by selecting the item 56 and ‘dragging’ it into the adjacent day”); *see also id.* at Figs. 29 & 31; *id.* at 7:19–21 (“FIG. 29 illustrates a screen shot of an online or electronic banking interface according to various embodiments of the present invention.”) & 7:33–35 (same).

These disclosures demonstrate that a “graphical banking interface” is a type of graphical user interface, and USAA submits technical dictionary definitions of “graphical user interface.”

(See Dkt. No. 213, Ex. 6, *McGraw Hill Dictionary of Scientific and Technical Terms* 922 (6th ed. 2003) (“A user interface in which program features are represented by icons that the user can access and manipulate with a pointing device.”); *id.*, Ex. 7, *Dictionary of Science and Technology* 283 (2nd ed. 2007) (“an interface between an operating system or program and the user that uses graphics or icons to represent functions or file”); *id.*, Ex. 13, *Dictionary of Computer and Internet Terms* 225–26 (9th ed. 2006) (“[A] way of communicating with the computer by manipulating icons (pictures) and windows with a mouse. Before GUIs became widespread, it was common for computers to operate in a mode where only text (no graphics) could be displayed on the screen”).)

These technical definitions can be considered as evidence of how a person of ordinary skill in the art would have understood the well-known term “graphical user interface” at the relevant time. See *Phillips*, 415 F.3d at 1318. A fair reading of the intrinsic and extrinsic evidence is that this understanding would inform the meaning of the similar term “graphical banking interface.”

These technical definitions do not preclude using text in conjunction with graphics, and nothing in the intrinsic evidence discussed by the parties suggests that a “graphical banking interface” could not include text. Instead, a fair reading, in light of the intrinsic and extrinsic evidence presented, is that a “graphical banking interface” must employ graphical elements and may also employ textual elements. Indeed, the specification discloses that “various graphic and text features designed to efficiently communicate information” can address purported shortcomings in the prior art. ’623 Patent at 7:42–47. At the November 10, 2021 hearing, USAA acknowledged that it is not arguing for exclusion of text (so long as the interface includes graphics). Also, to be clear, the Court notes that, at least for purposes of this patent, the shape of a letter or number is not a “graphic.”

These findings are also consistent with disclosure in one of the provisional patent applications to which the '623 Patent claims priority (cited here by USAA), in which the patentee stated that “Internet banking UIs currently in use do not adequately consolidate and present customer information such that customers may quickly assess financial conditions to determine if any adjustments are necessary,” and “distributing funds between accounts is typically performed using *text-input* features that add little to the customer’s understanding of account dynamics.” (Dkt. No. 213, Ex. 12, United States Provisional Patent Application No. 61/065,134 at ¶ 4 (emphasis added); *see id.* at ¶ 12 (“the user interface may include a slide controller for shifting or redistributing funds between a demand account and a savings as needed”).)

The Court therefore hereby construes **“graphical banking interface”** to mean **“an interface that uses graphics to display banking information and to receive input from the user.”**

31. “graphical representation”

“graphical representation” (’623 Patent, Claim 1)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction necessary	“a representation of information in the form of pictures or diagrams instead of text”

(Dkt. No. 170, Ex. B, at 14; Dkt. No. 226, Ex. A, at 78.)

(a) The Parties’ Positions

PNC argues that “[t]he term ‘graphical representation’ is simple and straightforward and can encompass any graphical image, whether comprising letters or other shapes.” (Dkt. No. 196, at 26.)

USAA responds that “USAA’s construction is consistent with the intrinsic record, which makes clear that there is a difference between ‘graphical’ representations and ‘textual’ representations.” (Dkt. No. 213, at 23.) USAA argues that “PNC’s attempt to expand the claims is particularly inappropriate because it specifically distinguished during prosecution the ‘box containing text’ that it now says would satisfy the claims in responding to the Examiner’s rejection over the prior art, Ariely (2009/0187075).” (*Id.*, at 24.)

PNC replies that “nothing in the intrinsic record limits ‘graphical representation’ to only pictures or diagrams (and not text),” and “[t]his is consistent with the ’134 Provisional contemplating that text may be part of a graphic.” (Dkt. No. 214, at 9 (citation omitted).) PNC also argues that “the applicants differentiating over the prior art for multiple reasons, including because the art did not teach or suggest that ‘a “graphical representation” is *generated*,’ D.I. 213, Ex. 17 at 8–9 (emphasis added), does not, as USAA suggests, rise to the exacting level of disclaiming graphics containing text.” (Dkt. No. 214, at 9.)

(b) Analysis

Claim 1 of the ’623 Patent recites (emphasis added):

1. A computer-assisted method for facilitating financial savings, the method comprising:

accepting, using a processor, a funds transfer request by a user of an amount of funds between a funding account and at least one receiving account, wherein the funding account and the receiving account are separate accounts;

accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds;

transferring the amount of funds from the funding account to the at least one receiving account;

generating, using the processor, for display on a graphical banking interface, a *graphical representation* of the designation of the intended purpose of use of the amount of funds; and

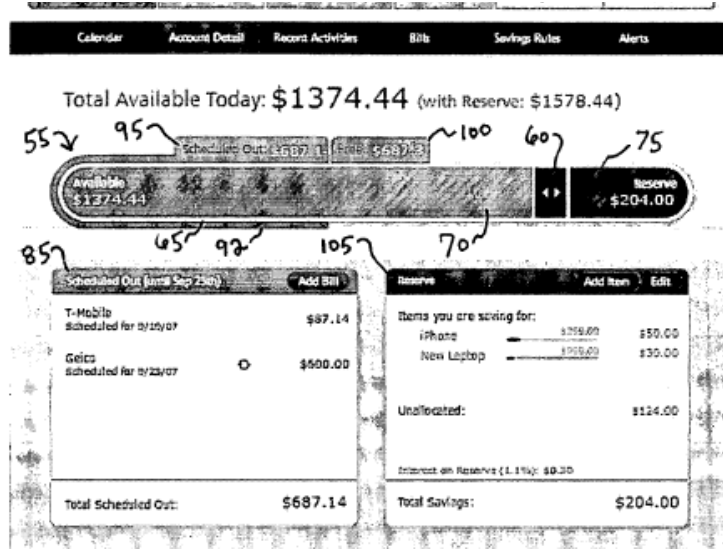
transferring the amount of funds from the at least one receiving account to the funding account on the date of intended use.

During prosecution of the '623 Patent, the patentee distinguished the “Ariely” reference (United States Patent Application Publication No. 2009/0187075), which disclosed a “savings goal” on “the owner’s savings homepage.” The patentee argued that Ariely did not “teach or suggest that a ‘graphical representation’ is generated as claimed in independent Claim[] 1.” (Dkt. No. 213, Ex. 16, Apr. 20, 2012 Amendment and Response to Office Action, at 8–9.)

This brief statement by the patentee does not rise to the level of a clear and unmistakable disclaimer. *See Omega Eng’g*, 334 F.3d at 1324; *see also Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008) (“[A] patentee may limit the meaning of a claim term . . . by *clearly* characterizing the invention in a way to try to overcome rejections based on prior art.”) (emphasis added). In particular, the patentee did not describe the “savings goal 103” of Ariely when distinguishing it.

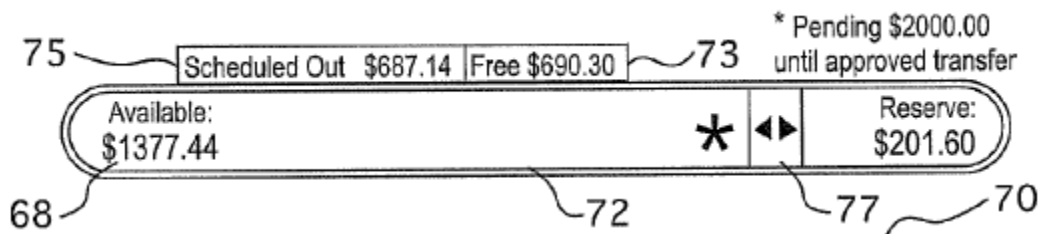
Still, the patentee’s statement is at least consistent with USAA’s position that text is not a “graphical representation.” Also, USAA’s interpretation is consistent with one of the provisional patent applications to which the '623 Patent claims priority, United States Provisional Patent Application No. 61/065,134 (“the '134 Application”). The '134 Application states, with reference to Figure 4 therein, that whereas the information in item 85 is “bill payment information” that is “presented textually,” item 92 is a “graphical element . . . for graphically indicating the amount of funds necessary to satisfy all of the customer’s near-term bill obligations . . . relative to the available account balance.” (Dkt. No. 213, Ex. 12, at ¶¶ 24–25.) Figure 4 of the '134 Application is reproduced here:

50 ↘



This application thus distinguishes between “graphic” features and “text” features. *See id.*; *see also id.* at ¶ 17 (“screen 50 may include various graphic and text features”); *id.* at ¶ 23 (similar).

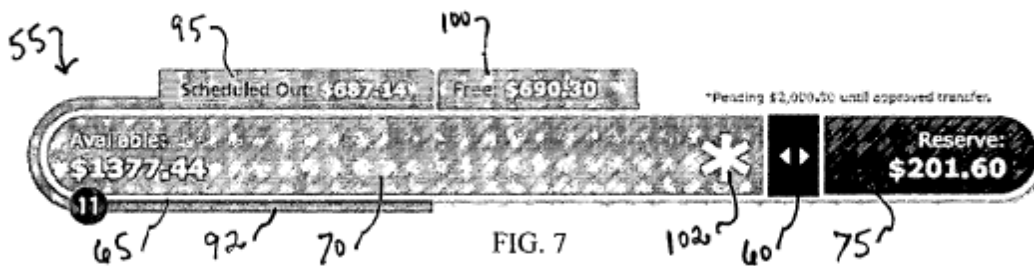
The ’623 Patent likewise distinguishes between “graphic” and “text.” ’623 Patent at 7:42–47 (“the various electronic banking interfaces described herein . . . may include various graphic and text features designed to efficiently communicate information regarding aspects of a customer’s finances”). The “free total graphic 73” (*id.* at 5:14–16), which PNC argues “is simply a box with a number in it” (Dkt. No. 196, at 26), is not just text but rather is part of a graphic, as shown in the following excerpt of Figure 11 of the ’623 Patent:



This figure contains a “graphic 72” in which a slider can be used to provide input and to illustrate amounts. Regarding this figure, the specification discloses:

The screen shot of FIG. 11 illustrates an account detail page in which an actual amount 68 that a user can access is displayed on a graphic 72. The account detail page also illustrates a reserve balance 70 that can be allocated to define savings goals. The account detail page allows for a user to move money between a reserve account and the account that contains the available balance using a graphic 77.

See '623 Patent at 5:3–11. The above-discussed '134 Application, to which the '623 Patent claimed priority, likewise refers to a “money bar” graphic, and Figure 7 of the '134 Application is reproduced here:



(See Dkt. No. 213, Ex. 12, at ¶ 12 (“slide controller 55” “may be configured to provide” both “a graphical indication of a pending deposit into the available account and a text caption indicating the amount of the pending deposit”) & A2. This application also explains that a graphic element, such as “second flag element 100” in the above-reproduced Figure 7, may “contain[] text indicating the amount of the available account balance in excess of the total amount of near-term bill payments.” (*Id.*, at ¶ 28.)

PNC also cites Figure 28 of the '623 Patent (*see* Dkt. No. 196, at 26), but to whatever extent PNC maintains that “graphic 308” in Figure 28 is text, this argument is unavailing because Figure 28 illustrates a calendar and the specification discloses that a “scheduled item” can be moved by “dragging it into the adjacent day,” which is a graphical illustration and operation. '623 Patent at 4:22–24.

Further, extrinsic technical dictionary definitions reinforce the above-discussed intrinsic evidence by defining “graphics” as “pictures or lines which can be drawn on paper or on a screen to represent information.” (Dkt. No. 213, *Dictionary of Computing* 152 (5th ed. 2004).)

Finally, this is also consistent with the Court’s analysis of the above-discussed term “graphical banking interface,” which the claim here at issue recites in conjunction with the term “graphical representation,” and the Court also notes that, at least for purposes of this patent, the shape of a letter or number is not a “graphic.”

The Court therefore hereby construes **“graphical representation”** to mean **“a representation of information that includes pictures and/or diagrams and that may also include text.”**

32. “accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds”

“accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds” (’623 Patent, Claim 1)	
PNC’s Proposed Construction	USAA’s Proposed Construction
No additional construction is necessary at this time.	“the processor tags the funds with a date and intended use based on the user’s entries into a date field and intended use field”

(Dkt. No. 170, Ex. B, at 14; Dkt. No. 226, Ex. A, at 79.)

(a) The Parties’ Positions

PNC argues that USAA’s proposal to replace “accepting” with “tags” would “improperly transform this step from one that involves *receiving* information from the user to *doing* something with that information.” (Dkt. No. 196, at 27–28.)

USAA responds that “USAA’s proposed construction is consistent with the intrinsic record, and necessary to prevent PNC from reading out the ‘key’ feature it pointed to as allegedly inventive in its § 101 briefing.” (Dkt. No. 213, at 26.) USAA also argues that “[t]he second portion of USAA’s construction—which requires that the information in the ‘tag’ be ‘based on the user’s entries into a date field and intended use field’—is needed because PNC is attempting to read the claims on a situation where the user happens to put information (e.g., a purpose like ‘bill pay’ and a date that the bill is due) in a generic field like a ‘memo.’” (*Id.*, at 28.)

PNC replies that “this term’s use of ‘accepting’ indicates that only receiving information is required, not ‘tagging’ or doing something with the information,” “[r]ather, the step of tagging can occur after the information is accepted.” (Dkt. No. 214, at 10 (citation omitted).) PNC also argues: “That ‘tagging’ occurs elsewhere in the claim does not render the invention abstract.” (*Id.*) PNC further argues that there is no disavowal or lexicography that would require separate “date field” and “intended use field” entries, and “this term also covers an entry like ‘Birthday;10/4,’ which conveys a date and intended use in a single field.” (*Id.*)

(b) Analysis

Claim 1 of the ’623 Patent recites (emphasis added):

1. A computer-assisted method for facilitating financial savings, the method comprising:

accepting, using a processor, a funds transfer request by a user of an amount of funds between a funding account and at least one receiving account, wherein the funding account and the receiving account are separate accounts;

accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds;

transferring the amount of funds from the funding account to the at least one receiving account;

generating, using the processor, for display on a graphical banking interface, a graphical representation of the designation of the intended purpose of use of the amount of funds; and

transferring the amount of funds from the at least one receiving account to the funding account on the date of intended use.

USAA does not persuasively support its proposal of interpreting “accepting” to mean “tagging” the funds or to require “user[] entries into a date field and intended use field.” Instead, the specification refers more generically to “edit[ing]” or “add[ing]” information:

FIG. 30 illustrates a screen shot of an online or electronic banking interface according to various embodiments of the present invention. The screen in FIG. 30 results when a user selects an “Edit” tab 314 in FIG. 29. In the embodiment illustrated in FIG. 30, the user can edit a description of the item for which funds are designated, a date of the designated event, a reminder date and a monetary amount of the designated amount. FIG. 31 illustrates a screen shot of an online or electronic banking interface according to various embodiments of the present invention. The screen in FIG. 31 results when a user selects an “Add” tab 316 in FIG. 29 or 318 in FIG. 30. In the embodiment illustrated in FIG. 31, the user can add an item for which funds are designated. After the item is added, the user can select a “Save” tab 319, which will cause the item to be displayed on the calendar 304.

’623 Patent at 7:25–41.

Additional disclosures cited by USAA do not compel a narrower construction because the claim term here at issue recites merely “accepting.” *See* ’623 Patent at 6:58–65 (“tagged, or identified, as being designated for a particular purpose”).

Also, the specification does not disclose “fields,” and the specification discloses adjusting dates by interacting with a calendar such as by dragging and dropping (*see* ’623 Patent at 4:22–24), which further weighs against USAA’s proposal of requiring a user to enter a date into a date field. USAA does not persuasively support its assertion that the distinct recitals of “purpose” and “date” necessarily require separate fields. (*See* Dkt. No. 213, at 28.)

Statements by PNC in response to a motion to dismiss, cited here by USAA, do not compel otherwise. (*See* Dkt. No. 80 at 13 (“The ’623 Patent is not directed to an abstract concept, but to a new way of tagging or labeling amounts of money in an online bank account”); *see also id.* at 1, 14 (“‘tagging’ amounts of money with information about an intended use and sequestering

the money in a reserve account until the date of intended use”), 15 (“An important feature of the invention is that amounts of money can be ‘tagged’ for a particular purpose.”), 16 (“without the tagging feature, the transfers would quickly become a useless jumble of scheduled transactions that made it harder rather than easier to manage account balances”) & 27 (“using a computerized banking system to tag an amount of money in an account with an intended purpose”).)

PNC’s statement in opposition to the motion relates to the claimed invention as a whole, which includes more limitations than merely “accepting.” For example, Claim 1 of the ’623 Patent recites “generating, using the processor, for display on a graphical banking interface, a graphical representation of the designation of the intended purpose of use of the amount of funds.”

Finally, illustration of separate fields in particular illustrations of the ’623 Patent, such as Figures 30 and 31 cited by USAA, is unpersuasive because “patent coverage is not necessarily limited to inventions that look like the ones in the figures.” *See MBO Labs.*, 415 F.3d at 1333 (citation omitted).

The Court therefore hereby expressly rejects USAA’s proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *ActiveVideo*, 694 F.3d at 1326; *Summit 6*, 802 F.3d at 1291; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes “**accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds**” to have its **plain meaning**.

33. “transferring the amount of funds from at least one receiving account to the funding account on the date of intended use”

<p>“transferring the amount of funds from at least one receiving account to the funding account on the date of intended use” (’623 Patent, Claim 1)</p>	
PNC’s Proposed Construction	USAA’s Proposed Construction
No further construction necessary	“transferring the amount of funds back to the funding account based on the date identified by the user during the initial funds transfer request”

(Dkt. No. 170, Ex. B, at 14; Dkt. No. 226, Ex. A, at 80.)

(a) The Parties’ Positions

PNC argues that because “the claim language makes clear that the ‘date of intended use’ need not be identified by the user during the initial funds transfer request,” “USAA seeks improperly to import a limitation inconsistent with the claim language itself,” and “USAA’s proposed additional limitation also fails to find support in the specification.” (Dkt. No. 196, at 29 & 30.)

USAA responds that “USAA’s construction makes clear that the claims require this ‘round trip’ transfer [described in PNC’s opposition to USAA’s § 101 challenge], rather than a situation where a user simply schedules two transfers—one from the funding to the receiving account, and another back.” (Dkt. No. 213, at 29–30.) USAA urges that “PNC’s attempt to reverse its prior statements to this Court have no merit.” (*Id.*, at 30.)

PNC replies:

Contrary to USAA’s arguments, the claim language does not require that the user identify the date of intended use at the same time the user makes the funds transfer request. Rather, the claim language clearly includes distinct steps: first accepting funds and second accepting a date of intended use. In addition, the specification

provides examples showing that these steps may occur at different times. *See, e.g.*, '623 Fig. 29 (“MP3 Player” not having an “Event Date”); *id.* at Figure 30 (depicting an “Edit” feature for the “Event Date”). Furthermore, such an interpretation is consistent with PNC’s § 101 validity arguments, because the inventive step of “tagging” does not require designating both the intended purpose and return date at the same time.

(Dkt. No. 214, at 10.)

(b) Analysis

Claim 1 of the '623 Patent recites (emphasis added):

1. A computer-assisted method for facilitating financial savings, the method comprising:

accepting, using a processor, a funds transfer request by a user of an amount of funds between a funding account and at least one receiving account, wherein the funding account and the receiving account are separate accounts;

accepting, from the user, using the processor, a designation of an intended purpose of use of the amount of funds and a date of intended use of the amount of funds;

transferring the amount of funds from the funding account to the at least one receiving account;

generating, using the processor, for display on a graphical banking interface, a graphical representation of the designation of the intended purpose of use of the amount of funds; and

transferring the amount of funds from the at least one receiving account to the funding account on the date of intended use.

On its face, the recital of “on the date of intended use” in the disputed term refers back to the recital of “a date of intended use” in the “accepting, from the user . . .” step, in which the method accepts “a designation of . . . a date of intended use of the amount of funds.” *Cf. Haemonetics*, 607 F.3d at 781–82 (as to claim reciting “[a] centrifugal unit comprising a centrifugal component and a plurality of tubes,” noting as to a subsequent limitation that “[t]he claim then further recites, not the centrifugal component and not *a* centrifugal unit, but “*the* centrifugal unit”; finding error in “ignor[ing] the antecedent basis for ‘the centrifugal unit’”).

Nonetheless, as PNC points out, nothing in the claim language requires the user to identify the “date of intended use” in the “accepting, from the user . . .” step at the same time that the user makes the “funds transfer request” in the “accepting, using a processor . . .” step.

This is also consistent with Figure 29 illustrating “MP3 Player” as not having an “Event Date” (in contrast with other items being listed with corresponding event dates) and Figure 30 illustrating “MP3 Player” together with “Set Event Date.” *See* ’623 Patent at Figs. 29 & 30 & 7:19–32.

Finally, USAA’s reliance on PNC’s statements in opposing a motion are unpersuasive for substantially the same reasons set forth above as the “accepting, from the user . . .” term. USAA cites PNC’s statement that “[m]anually scheduling each leg of the round-trip transfer, and writing down on a separate piece of paper information about the intended use of the funds, would not replicate or serve the same purpose as the inventive method.” (*See* Dkt. No. 80, at 17–18 & 25.) The above-reproduced claim, by contrast, requires a processor accepting a designation of an intended purpose of use of the amount of funds as well as a designation of a date of intended use of the amount of funds.

The Court therefore hereby construes **“transferring the amount of funds from at least one receiving account to the funding account on the date of intended use”** to mean **“transferring the designated amount of funds from at least one receiving account to the funding account on the designated date of intended use.”**

VI. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from

mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

So ORDERED and SIGNED this 22nd day of November, 2021.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE