NOTE: This disposition is nonprecedential.

# United States Court of Appeals for the Federal Circuit

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**UNITED SERVICES AUTOMOBILE ASSOCIATION,**
*Appellant*

**v.**

**PNC BANK N.A.,**
*Cross-Appellant*

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2023-2171, 2023-2172

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Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2022-00076.

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Decided: January 30, 2025

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LISA GLASSER, Irell & Manella LLP, Newport Beach, CA, argued for appellant. Also represented by STEPHEN PAYNE, ANTHONY ROWLES; JASON SHEASBY, Los Angeles, CA; WILLIAM M. JAY, ROHINIYURIE TASHIMA, Goodwin Procter LLP, Washington, DC; DAVID ZIMMER, Boston, MA.

GREGORY H. LANTIER, Wilmer Cutler Pickering Hale and Dorr LLP, Washington, DC, argued for cross-appellant. Also represented by MARK CHRISTOPHER FLEMING, MONICA GREWAL, Boston, MA.

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Before DYK, PROST, and CUNNINGHAM, *Circuit Judges*.

DYK, *Circuit Judge*.

United Services Automobile Association ("USAA") owns U.S. Patent No. 10,769,598 (the "'598 patent"). PNC Bank N.A. ("PNC") petitioned for inter partes review ("IPR") of claims 1–20 of the '598 patent. The Patent Trial and Appeal Board ("Board") issued a final decision determining that claims 1 and 8–20 were unpatentable and that PNC had not shown claims 2–7 to be unpatentable. *See PNC Bank N.A. v. United Servs. Auto. Ass'n*, No. IPR2022-00065, at 69 (P.T.A.B. May 10, 2023) ("*Decision*"). USAA appeals the Board's determination as to claims 1 and 8–20, and PNC cross-appeals the Board's determination as to claims 2–7. We *affirm* as to USAA's appeal and *reverse* as to PNC's cross-appeal.

## BACKGROUND

The '598 patent, entitled "Systems and Methods for Remote Deposit of Checks," is directed to remote check deposit technology. Remote check deposit enables a customer to deposit a check by taking a picture of it and sending it to a bank, which clears the check using the check image rather than the physical check itself. Remote check deposit systems generally involve two components: (1) a customer's personal computing device, which captures an image of the check, and (2) a bank's server, which processes the check image. In the '598 patent, the customer's personal computing device is a general-purpose computing device, such as a mobile phone. USAA alleged that this was in contrast to other early remote check deposit systems, which required the customer to use a specialized device, such as a check scanner.

Claims 1 and 8–20 are the subject of the main appeal. Claim 1 is exemplary and recites:

> A method of facilitating remotely depositing funds into a user's account with a bank's computing system and without using an Automatic Teller Machine (ATM), comprising:
>
> > *providing a remote deposit application for download* to a customer device, wherein the remote deposit application comprises computer-executable instructions that, when executed by a processor, provide a user-interface and control a camera associated with the customer device to facilitate capturing at least one electronic image of a check;
> >
> > receiving at the bank's computing system, via the user-interface on the customer device: authentication data, an electronic identification of an account for receipt of a value associated with the check, an electronic indication of the value associated with the check, and the at least one electronic image of the check;
> >
> > *determining whether the check was previously deposited using the at least one electronic image of the check*; and
> >
> > initiating and/or logging a first deposit of the value to the account via the bank's computing system unless the bank's computing system determines from the at least one electronic image of the check that the check was previously deposited.

'598 patent, col. 15, ll. 39–62 (emphases added).

Claims 2–7 depend from claim 1 and are the subject of the cross-appeal. Claim 2 is exemplary and recites:

> The method of claim 1, comprising passing error processing before initiating and/or logging the deposit of the value to the account.

'598 patent, col. 15, ll. 63–65.

PNC filed a petition for IPR of claims 1–20, asserting that they were obvious over International Patent Application Publication No. WO 2005/043857 ("Garcia"), U.S. Patent Application Publication No. 2006/0249567 ("Byrne"), and U.S. Patent Application Publication No. 2005/0097046 ("Singfield").[1] The Board granted institution and later determined that PNC had shown claims 1 and 8–20 to be unpatentable as obvious but had not shown claims 2–7 to be unpatentable as obvious. USAA appeals, and PNC cross-appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

## DISCUSSION

A patent claim is unpatentable for obviousness "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a) (pre-AIA). The claim is obvious if a skilled artisan would be motivated to combine the asserted prior art references as described by the claim limitation. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). "Obviousness is a question of law based on underlying

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[1] PNC also relied on U.S. Patent Application Publication No. 2003/0097592 ("Adusumilli") in its challenge of claim 17. Because the parties do not separately address this reference, we need not consider it.

findings of fact." *In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009).

I

We first address USAA's appeal of the Board's determination that claims 1 and 8–20 were obvious over Garcia, Byrne, and Singfield. Garcia is PNC's primary reference and discloses remote check deposit using a mobile phone: Garcia's mobile phone captures and transmits the electronic image of the check to a bank, and Garcia's bank server uses that image to "[r]ecogniz[e], verify[], and electronically treat[] and process[]" the information from the check. J.A. 1051 (col. 6, ll. 8–10). Byrne and Singfield both disclose performing remote check deposit using a desktop computer that is connected to a specialized check scanner. In Byrne, the application software is packaged as a "thin client." Software is not installed on the disk and instead, "the plug-in is downloaded with each invocation of the application software," J.A 1074 ¶ 46, hence the appellation, "thin client." In Singfield, the system performs duplicate detection, that is, it detects whether the check was previously deposited, by "verif[ying] [that] the check information (check number, check amount, routing and account number, signature) does not exactly match any previous deposits linked to the user's account." J.A. 1116, claim 20.

The Board agreed with PNC that Garcia discloses most of the claim limitations for the use of a mobile device for check deposit but lacks some "implementation details" of the claims that would be obvious in light of Byrne and Singfield. *Decision* at 48. USAA challenges two aspects of the Board's decision: that a skilled artisan would have "been motivated to use . . . [(1)] Byrne's downloaded thin client and [(2)] Singfield's duplicate check detection." *Id.*

A

USAA argues that the Board erred in finding that a skilled artisan would be motivated to combine Byrne's thin-client application with Garcia's remote check deposit so that the combination provided a "remote deposit application" as required by claim 1. USAA argues that a skilled artisan would not be motivated to implement Garcia using a thin-client application because Garcia's remote check deposit would already be achieved by using the mobile phone's camera to take a picture of the check and then using its browser application to transmit that image to a bank. Byrne's thin-client application, USAA urges, is only useful when the customer's personal computing device does not natively possess image capture capabilities, as is the case with Byrne's desktop computer (which uses a specialized check scanner).

We disagree. PNC's petition asserted, and the Board found, that Byrne's thin-client application provided benefits that would render it obvious. Byrne explains that, because its plug-in does not automatically have the same level of access to the computer disk, the thin-client approach provides "combined benefits of security with ease and speed of software maintenance." J.A 1074 ¶ 46. And the Board credited PNC's unpatentability expert Dr. Mowry's unrebutted testimony that "a thin client improves security and ease of maintenance" and that "an ordinary artisan would have understood downloading a thin client to be a well-known way of distributing software in the relevant time period." *Decision* at 25 (citing J.A. 926–27, 929–30). Indeed, USAA's own unpatentability expert Dr. Creusere conceded that "Byrne definitely teaches that software maintenance is dramatically simplified because the thin client plug-in is downloaded every time [the user] use[s] it." *See id.* (citing J.A. 3858 (140:14–17)).

There was no suggestion that a skilled artisan would perceive any difficulties in combining Garcia and Byrne. To the contrary, the Board relied on Byrne's disclosures and both experts' testimony in concluding that "an ordinary artisan would have understood such an implementation to apply a known technique (Byrne's downloading thin-client software) to a known device (Garcia's mobile phone) with predictable results" because they "both describe remotely depositing a check . . . and both perform substantially similar steps." *Decision* at 25–26.

USAA complains that the Board failed to consider drawbacks associated with the thin-client application. But the Board considered USAA's arguments regarding the processing and bandwidth required to repeatedly download Byrne's thin client onto Garcia's mobile phone and determined "that the tradeoffs associated with [PNC's] proposal would not have undermined an ordinary artisan's motivation to implement Garcia's application with a downloaded thin-client that controls the camera and provides a user interface, as disclosed by Byrne." *Decision* at 29. The Board properly explained that it "evaluate[s] whether [PNC's] proposal would have been obvious, not whether it would have been the 'most' obvious implementation of Garcia." *Id.* at 31 (citing *Dome Patent L.P. v. Lee*, 799 F.3d 1372, 1381 (Fed. Cir. 2015)). As explained in detail below, we have repeatedly held that a combination need not be the best solution for obviousness purposes.

B

USAA next argues that the Board erred in finding that the Garcia-Singfield combination teaches claim 1's "determining whether the check was previously deposited using the at least one electronic image of the check" because Singfield's duplicate detection does not use information from the electronic image of the check. USAA argues that Singfield's technique for duplicate detection uses magnetic ink

character recognition and user-entered data and that the only information from the check image used by Singfield is the customer's signature, which could not be feasibly analyzed to avoid duplicate deposits on an unspecialized mobile phone.

The problem with USAA's argument is that it incorrectly assumes that Singfield itself must expressly disclose using information from the check image. The Board found that Garcia teaches using information extracted from the check image and determined that it would be obvious to a skilled artisan to combine that teaching with Singfield's duplicate detection. It is thus irrelevant whether Singfield teaches using information from the electronic image, since the obviousness inquiry looks to the proposed prior art combination as a whole, not individual references. *See Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed Cir. 2019). The Board found that "Garcia's server receives the check image and performs duplicate detection (using Singfield's method) based on that image." *Decision* at 38–39. This finding was sufficient to support the Board's conclusion of obviousness.

II

We now turn to PNC's cross-appeal of the Board's decision declining to find claims 2–7 obvious. The claims require error processing to be performed by the customer's mobile phone. On appeal, PNC argues that the Board improperly found that Garcia's bank server already taught error processing and that a skilled artisan would not be motivated to "shift" this step to Garcia's mobile phone. *See* Cross-Appellant's Br. 65. The Board's conclusion is not supported by substantial evidence.

Before the Board, PNC argued that a skilled artisan "would have been motivated to address errors at Garcia's mobile device before the check image is transmitted/submitted to avoid wasting communications resources and

adding delays." J.A. 283. The Board disagreed, crediting USAA's argument that a skilled artisan would not be motivated to insert Byrne's error processing into Garcia's *mobile phone* because it would be preferable to insert Byrne's error processing into the *bank's server*, where the rest of verification takes place. We conclude that the Board erred in rejecting PNC's motivation to combine solely because this alternative arrangement also had claimed benefits.

In rejecting PNC's motivation to combine Garcia and Byrne to "avoid wasting communications resources and adding delays," J.A. 283, the Board remarked that "*all* networks have bandwidth and resource constraints, and *all* communications take time." *Decision* at 60. The Board reasoned that, because Dr. Mowry testified that he "wouldn't necessarily characterize [Garcia] as bandwidth intensive," there was an insufficient showing of a motivation to combine Byrne and Garcia to save bandwidth. *Id.* at 61 (alteration in original) (quoting J.A. 3773). The mere fact that all networks share these problems does not mean that addressing them is not obvious, since the relevant inquiry is simply whether skilled artisan would have been motivated to modify the prior art as claimed. *See Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 797 (Fed. Cir. 2021); *Belden*, 805 F.3d at 1073. There was undisputed evidence that this combination addressed these problems. Dr. Mowry also testified that Byrne's checking steps would "reduce the number of failed transactions, thereby improving Garcia's overall functionality and experience." J.A. 952 ¶ 115.

"When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *KSR*, 550 U.S. at 402. The combination does not need to be the best or preferred approach but need only be "desirable in light of the prior art." *Honeywell Int'l Inc.*

*v. 3G Licensing, S.A.*, 124 F.4th 1345, 1356 (Fed. Cir 2025). It was accordingly not enough for the Board to simply identify an alternative prior art combination as beneficial. Rather, the Board had to consider the combination raised in the petition in light of the prior art and determine whether it would have been obvious to a person of ordinary skill in the art.

The Board's preoccupation with the benefits associated with server-side error processing led it to ignore the undisputed benefits of placing Byrne's error processing in Garcia's mobile phone. Garcia's mobile phone disclosed remote check deposit involving the processing and verification of check information, and Byrne explained that error processing accomplished specific business goals, e.g., "reduc[ing] transportation time and costs" and "provid[ing] for the customer access to timely information on the status of the customer's deposit." J.A. 1073 ¶¶ 20, 31. Both references involve remote check deposit technology, and there was unrebutted expert testimony in the record that a person of ordinary skill in the art would find implementing Byrne's error processing as "just another step in Garcia's check deposit process, with identifying checks with errors before they are submitted to the bank as a predictable result." J.A. 953 ¶ 117. This was accordingly the precise situation where a person of ordinary skill in the art is "left with two design choices," in which case we have explained that "[e]ach of these two design choices is an obvious combination of prior-art elements." *ACCO Brands Corp. v. Fellowes, Inc.*, 813 F.3d 1361, 1367 (Fed. Cir. 2016). We agree with PNC that the undisputed evidence in the record shows a motivation to combine Garcia and Byrne. The Board's conclusion is thus not supported by substantial evidence, and the undisputed evidence in the record shows that the claims would have been obvious.

## CONCLUSION

We have considered USAA's remaining arguments and find them unpersuasive. We affirm the Board's decision determining that claims 1 and 8–20 were obvious and reverse the Board's decision determining that claims 2–7 were not obvious.

**AFFIRMED-IN-PART AND REVERSED-IN-PART**

## COSTS

Costs to cross-appellant PNC.