

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**CAPITAL SECURITY SYSTEMS, INC.,**  
*Plaintiff-Appellant*

v.

**NCR CORPORATION, SUNTRUST BANKS, INC.,  
SUNTRUST BANK,**  
*Defendants-Appellees*

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2017-2368

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Appeal from the United States District Court for the  
Northern District of Georgia in No. 1:14-cv-01516-WSD,  
Judge William S. Duffey, Jr.

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Decided: March 7, 2018

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PETER LAMBRIANAKOS, Brown Rudnick, LLP, New  
York, NY, argued for plaintiff-appellant. Also represent-  
ed by ALFRED ROSS FABRICANT.

PAUL WHITFIELD HUGHES, Mayer Brown LLP, Wash-  
ington, district court, argued for defendants-appellees.  
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WEINBERG.

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Before PROST, *Chief Judge*, MOORE and STOLL,  
*Circuit Judges*.

STOLL, *Circuit Judge*.

Capital Security Systems, Inc. filed a patent infringement action against NCR Corporation and other defendants in the U.S. District Court for the Northern District of Georgia, asserting infringement of U.S. Patent Nos. 5,897,625; 7,653,600; 7,991,696; and 8,121,948. The district court granted summary judgment of invalidity, holding indefinite the term 1) “ascertains an apparent signature” in claim 1 of the ’600 patent, claim 1 of the ’696 patent, and claims 1 and 2 of the ’948 patent; and 2) “transactional operator” in claim 15 of the ’625 patent. We reverse the district court’s determination that the term “ascertains an apparent signature” is indefinite, we affirm the district court’s determination that the term “transactional operator” is indefinite, and we remand to the district court for further proceedings consistent with this opinion.

## BACKGROUND

### I.

The patents asserted by Capital Security are directed to an automated document cashing machine. *See, e.g.*, ’625 patent col. 3 ll. 57–58. The ’600, ’696, and ’948 patents (“the continuation patents”) share a common specification and each claim priority to the parent ’625 patent.

The parent ’625 patent purports to “[increase] the profitability of the ATMs” by disclosing an “ATM-like machine that performs and allows a number of service options, such as for example the withdrawing of cash, the depositing of cash, the cashing of a check, the cashing of a money order, the buying of a money order, the transfer-

ring of funds by wire, paying a bill and purchasing of end user items.” *Id.* at col. 1 ll. 27–28, col. 3 ll. 57–63. The continuation patents likewise describe “an automated machine that cashes monetary transaction documents such as checks, money orders, and that makes deposit entries into the bank account of the user after validation of the user and monetary transaction document, without the aid of a bank teller.” ’600 patent, Abstract.

A. “*ascertains an apparent signature*”

The term “ascertains an apparent signature” is recited in the independent claims of the continuation patents. Although the term appears in slightly different forms in the different continuation patents, i.e., “ascertaining . . . an apparent signature” (the ’696 patent) and “ascertain an apparent signature” (the ’948 patent), the differences are negligible for purposes of this appeal. Claim 1 of the ’600 patent is illustrative:

1. An automated machine for an automated document handling system for making bank deposits with a monetary document comprising:

a card reader for a card having an intelligence associated therewith for identifying a system user as a qualified user;

a document scanner for scanning the monetary document;

a processor for receiving input from the document scanner and generating an image thereof;

a document reader in the machine for the monetary document from which a deposit is being made;

a display device coupled to the processor for displaying the image from the scanned

monetary document to the system user;  
and

an acceptance of deposit indicator operable by the processor after qualification of the user and validity of the document to indicate proof of deposit to the system user,

wherein the processor reviews images from a legal amount recognition (LAR) line and a courtesy amount recognition (CAR) line *and ascertains an apparent signature* from the document image in order to validate the document.

'600 patent col. 39 l. 35 – col. 40 l. 11 (emphasis added).

In connection with the disputed term, the specification of the '600 patent provides the following description:

In accordance with a further aspect of the invention, the bank will receive a validation that a signature is present at the signature line of the document, such as a check, before performing the requested financial transaction with respect to the check. To this end, the signature line is located and an analysis is made to an acceptable confidence level that a signature is present at the signature line. If a signature is lacking, the check will be rejected. Preferably, an analysis will be made as to verify the user's signature against stored user signatures to provide an additional security check to provide further confidence to the bank doing the transaction. Machine protection against a skilled forgery is difficult with current technology; nonetheless, unskilled forgeries or ambiguous signatures may still be detected.

*Id.* at col. 4 ll. 39–52.

B. “*transactional operator*”

The term “transactional operator” is recited in claim 15 of the parent ’625 patent:

15. An automated banking system for receiving cash from a user and for dispensing cash to a user comprising:

an automated machine having a card receiver for receiving a card which identifies a user as being qualified to use the machine;

a document receiver for receiving a document to be cashed;

a reader for reading the document for the amount and for a valid signature of the user if cash is to be dispensed to the user;

a cash dispenser in the automated machine for dispensing cash to the user operable upon an accepted reading by the reader;

a cash receiver for receiving cash and for analyzing the amount of cash received from the user;

a cash storage in the machine for receiving the cash being deposited by the user; and

a *transactional operator* for operation by the user to perform a transaction upon deposit of sufficient cash by user for the requested transaction.

’625 patent col. 24 ll. 31–53 (emphasis added).

The ’625 patent specification does not use the term “transactional operator.” It does, however, describe “keypads 26 and 27” on the machine that a user can

operate to perform a transaction option displayed to the user. Specifically, the specification teaches a display screen 20 which displays transaction options to a user including “1) withdraw; 2) deposit; 3) cash check; 4) cash money order; 5) buy money order; 6) wire transfer; 7) bill payments; 8) purchase.” *Id.* at col. 10 ll. 3–8. The display 20 is “adjacent a pair of flanking additional keypads 26 and 27” with “arrow keys” “aligned with these options 1–8.” *See id.* at col. 10 ll. 9–11. A user may depress one of the arrow keys to perform one of the displayed transaction options. *Id.* at col. 10 ll. 8–16.

The specification also teaches a computer within the machine that responds to input signals and executes commands. Specifically:

The user keyboard 18 supplies command signals to a microcomputer 21, in this embodiment a 133 Mhz Pentium-based personal computer having a 2.1 gigabyte hard disk drive for storing software, a 32 megabyte random access memory for storing instructions and operands, a 133 Mhz Pentium microprocessor, an ISA bus, a PCI bus, a serial interface, and a parallel interface. (FIG. 3). The microcomputer 21 executes application software under Windows 95, which among other things, responds to keystrokes on the user keyboard 18, and signals from other input devices as set forth below. The microcomputer 21 drives the output display 20 in response to the software it is executing and the various signals it receives from the input devices connected to transfer signals to it.

*Id.* at col. 8 ll. 43–56.

## II.

Prior to granting summary judgment of indefiniteness, the district court issued a claim construction order. In the order, the court determined that NCR failed, at the

*Markman* stage, to establish indefiniteness of the two disputed terms by clear and convincing evidence, and construed both terms. *Capital Sec. Sys., Inc. v. NCR Corp.*, No. 1:14-CV-1516-WSD, 2016 WL 3517595, at \*5 (N.D. Ga. June 28, 2016). The court noted that “NCR [did] not provide any expert testimony, prior art, or other evidence to show that a person skilled in the art would be unable to ascertain, with reasonable certainty, the scope of the invention.” *Id.* The court added, however, that it construed the terms “without prejudice” to NCR’s ability to challenge the validity of the claims for indefiniteness at the summary judgment stage. *Id.* at \*4.

The court construed “ascertains an apparent signature” as “[discovering] the presence of a person’s cursive signature in the signature field.” *Id.* at \*5. The court explained that its construction was “supported by the differentiation of *validating* a signature from recognizing the *presence* of a signature,” and that “the kind of signature that is the subject of the patents is a cursive one.” *Id.* at \*5 n.6. With respect to “transactional operator,” the court construed the term as “[a] computer within an automated banking system that, after deposit of sufficient cash, permits the user to perform the requested transaction.” *Id.* at \*6.

NCR subsequently filed a motion for summary judgment of invalidity asserting, among other things, that these two terms were indefinite. The district court, after considering competing testimony from Capital Security’s expert, Dr. Bajaj, and NCR’s expert, Dr. Chatterjee, granted summary judgment of indefiniteness. *See Capital Sec. Sys., Inc. v. NCR Corp.*, 263 F. Supp. 3d 1366, 1375 (N.D. Ga. 2017).

In analyzing “ascertains an apparent signature,” the district court credited Dr. Chatterjee’s testimony and found Dr. Bajaj’s competing testimony conclusory and not supported by “any reasoning or evidence.” *Id.* at 1372. In

particular, the court agreed with Dr. Chatterjee's testimony that:

[a] skilled artisan would not have been able to decide amongst four different plausible meanings of "apparent signature": (1) determining if anything in the way of a mark was present in the signature field, useful or otherwise; (2) distinguishing a mark resembling legible text from a mark never intended to be a signature, such as a scratch or smudge mark; (3) determining if the scanned image field corresponds to a handwritten cursive signature versus an otherwise legitimate block letter printed name; or (4) determining if the signature is forged.

*Id.* at 1373.

The court was unpersuaded by NCR's argument that Dr. Chatterjee's testimony merely shows that the term is broad, not indefinite. The court explained that "Dr. Chatterjee's opinion is not that the term is broad enough to encompass the four possibilities he set forth, but that a skilled artisan would not be able to decide whether the term encompasses all four examples or some subset of them." *Id.* at 1372.

Regarding "transactional operator," the court found Dr. Bajaj's testimony—that one of ordinary skill in the art would understand that a computer included in an automated banking system is the "transactional operator"—unsupported by any reasoning or evidence, and again credited Dr. Chatterjee's competing testimony. Specifically, Dr. Chatterjee testified that one of ordinary skill in the art would be unable to determine the scope of "transactional operator." He opined that "transactional operator" could be any of (1) a user interface allowing user selections; (2) an internal computer component like software executing an algorithm; or (3) a computer component that performs the task of "a bill reader [that] reads the provid-



er's account number and the user's identification from the bill" as in the transaction in Claim 17, and could include "various input devices such as user keyboards, touch screen, and auxiliary user input devices." *Id.* at 1374. The court concluded that "[a] person of ordinary skill in the art, informed by the specification and the prosecution history, would not be apprised with reasonable certainty about the scope of the invention." *Id.* at 1375.

Capital Security timely appealed to this court. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

We review de novo a district court's determination of indefiniteness, and we review for clear error any of the district court's underlying findings of fact based on extrinsic evidence. *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1312–13 (Fed. Cir. 2017). A patent claim must "particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

##### I. "*ascertains an apparent signature*"

NCR argues that, although the term "ascertains an apparent signature" does not appear verbatim in the specification, the term is not indefinite when considered in the context of the claims and the specification. We agree.

Claim 1 of the '600 patent recites a processor that "reviews images from a legal amount recognition (LAR) line and a courtesy amount recognition (CAR) line" of a scanned monetary document (e.g., check) and "*ascertains an apparent signature* from the document image in order

to validate the document.” Read in the context of this surrounding claim language, “ascertain[ing] an apparent signature” seems to require, consistent with the ordinary meaning of the claim language, determining the presence of what appears to be a signature. This is consistent with the specification.

The specification explains that the automated machine determines whether “a signature is present at the signature line of the document.” ’600 patent col. 4 ll. 40–41. Specifically, the invention accomplishes this by first locating the signature line, then analyzing “to an acceptable confidence level that a signature is present at the signature line.” *Id.* at col. 4 ll. 43–45. Thus, a skilled artisan would understand the claimed ascertaining step to correspond to determining the presence of a signature on the signature line of a check, while acknowledging that such a determination cannot be made with complete certainty.

The district court held “ascertains an apparent signature” indefinite principally because one of ordinary skill could implement it in any, all, or a subset, of the four different ways suggested by Dr. Chatterjee. *Capital Sec. Sys.*, 263 F. Supp. 3d at 1372–73. The four implementations suggested by Dr. Chatterjee, however, fall within a reasonable range of implementations permitted by the broad claim language as understood in light of the specification. The specification discloses that, based on the particular desired confidence level implemented in the system, a check may be accepted unless (1) “a signature is lacking,” ’600 patent col. 4 ll. 45–46; or (2) the signature does not pass verification against a stored signature “to provide an additional security check to provide further confidence,” *id.* at col. 4 ll. 46–49. Given this disclosure in the specification, we conclude that one of ordinary skill in the art would understand, with reasonable certainty, the scope of “ascertains an apparent signature” to include all four implementations.

Citing, *inter alia*, *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005), and *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014), NCR argues that “ascertain[ing] an apparent signature” is indefinite because it lacks any objective standard of measure. Appellee Br. 18–21. Unlike the terms determined to be indefinite in the cases relied on by NCR, however, the scope of the claimed ascertaining step does not depend on the “unrestrained, subjective opinion of a particular individual,” *Datamize*, 417 F.3d at 1350 (determining “aesthetically pleasing” to be indefinite), and is not subject to the “unpredictable vagaries of any one person’s opinion,” *Interval Licensing*, 766 F.3d at 1374 (determining “unobtrusive manner” to be indefinite).

NCR also analogized “[ascertaining] an apparent signature” to the term “block-like,” which was held indefinite in *In re Walter*, 698 F. App’x 1022, 1027 (Fed. Cir. 2017). In *In re Walter*, however, the term “block-like” was held indefinite in view of applicant’s “erratic” statements made during prosecution that defined the term in “inconsistent” ways. *Id.* at 1025, 27. In particular, the applicant suggested during prosecution that “block-like” could encompass any material with flat sides, or even discreet pieces conjoined “in some manner.” *Id.* at 1027. Here, on the other hand, Capital Security did not muddle the scope of “ascertains an apparent signature” during prosecution or otherwise. Accordingly, we do not conclude that the term “ascertains an apparent signature” is indefinite.

We agree with the claim construction adopted by the district court with one exception: we would remove the “cursive” limitation. Although the parent ’625 patent specification describes a “cursive signature,” *see, e.g.*, ’625 patent col. 4 ll. 10–11, the common specification of the continuation patents does not. In fact, of the three instances “cursive” appears in the specification, none of them relate to a user’s signature. ’600 patent col. 5 ll. 20–

22 (“[Account numbers] are difficult to locate and must be precisely delineated from other adjacent typing, printing, letter or cursive to allow the transaction to be accomplished.”); *id.* at col. 18 ll. 14–19 (“[T]he processor . . . will also read the cursive legal amount (LAR) line . . .”); *id.* at col. 27 ll. 45–49 (“[T]he area immediately surrounding the bounding box . . . is analyzed to determine whether portions of characters, cursive strokes or the like extend outside the bounding box region.”). Thus, we find no reason to limit “signature” to cursive. Accordingly, the correct construction of the term “ascertains an apparent signature” in the continuation patents is “to discover the presence of a person’s signature in the signature field.”

## II. “*transactional operator*”

Capital Security next argues that the claims and specification inform those skilled in the art about the scope of the “transactional operator” with reasonable certainty. Specifically, Capital Security argues that column 8, lines 43–56 of the ’625 patent specification describes an “embodiment of a transactional operator.” Appellant Br. 22. Consistent with this argument, Dr. Bajaj testified that one of ordinary skill in the art would understand “a computer included in an automated banking system” to be one that, “after deposit of sufficient cash, permits the user to perform the requested operation.” J.A. 2840. Dr. Bajaj explained that the claimed operations “would include options such as ‘withdraw,’ ‘deposit,’ and ‘cash check’ as described in Figure 9.” *Id.*

The passage relied on by Capital Security describes a microcomputer 21 that “responds to keystrokes on the user keyboard 18” and “signals from other inputs devices.” ’625 patent col. 8 ll. 52–53. It also explains that microcomputer 21 “drives the output display 20 in response to the software it is executing and the various signals it receives from the input devices connected to transfer signals to it.” *Id.* at col. 8 ll. 53–56. It is unclear from this

passage, however, whether the computer or “transactional operator” includes the microcomputer 21, the keyboard 18, and the display 20, or a subset thereof. It is also unclear why the “transactional operator” does not include the keypads 26 and 27 described in column 10 of the specification, which a user depresses to perform a transaction option.

This uncertainty is compounded by Capital Security’s representations during oral argument. When asked about the scope of the term during oral argument, Capital Security indicated that it includes the keyboard described in the passage, but not the display described in the same passage. Oral Arg. at 12:12–13:29, <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-2368.mp3>. Capital Security did not explain why the “transactional operator” would include keyboard 18, but not display 20, which displays the transaction options to a user. Nor did Capital Security explain why “transactional operator” would include keyboard 18, but not keypads 26 and 27, which a user depresses to perform a transaction option.

Indeed, we find no rationale supporting the seemingly arbitrary definition of “transactional operator” as a microprocessor and keyboard, while excluding the associated display and keypads. Because “transactional operator” has no commonly-accepted definition and its scope is unclear in view of the intrinsic evidence and Capital Security’s proposed construction, we agree with the district court that this term indefinite.

#### CONCLUSION

We have considered the parties’ remaining arguments and find them unpersuasive. Thus, we reverse the district court’s determination that “ascertains an apparent signature” in claim 1 of the ’600 patent, claim 1 of the ’696 patent, and claims 1 and 2 of the ’948 patent, is indefinite, and we affirm the district court’s determination that “transactional operator” in claim 15 of the ’625 patent is

indefinite. Accordingly, we remand to the district court for further proceedings consistent with this opinion.

**AFFIRMED-IN-PART, REVERSED-IN-PART, AND  
REMANDED**

COSTS

No costs.