No. 14-1135

United States Court of Appeals

for the Federal Circuit

CARDSOFT (ASSIGNMENT FOR THE BENEFIT OF CREDITORS), LLC,

Plaintiff-Appellee,

– v. –

VERIFONE, INC., HYPERCOM CORPORATION,
VERIFONE SYSTEMS INC.,

Defendants-Appellants,

and

INGENICO S.A., INGENICO CORP., INGENICO INC., WAY SYSTEMS, INC.,

Defendants.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF TEXAS, CASE NO. 08-CV-00098
HON. ROY S. PAYNE & HON. CHAD EVERINGHAM, M.JJ.

CORRECTED RESPONSIVE BRIEF OF PLAINTIFF-APPELLEE

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CERTIFICATE OF INTEREST

The undersigned attorney represents Plaintiff-Appellee CardSoft (Assignment for the Benefit of Creditors), LLC ("CardSoft"), which is the named party and the real party-in-interest in this appeal. CardSoft has no parent corporation, and no publicly-held corporation owns 10 percent or more of CardSoft's stock.

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STATEMENT OF RELATED CASES

CardSoft agrees that there are no related cases pending in this Court, but notes that there are presently two other cases currently pending in the United States District Court for the Eastern District of Texas involving CardSoft and the patents at issue in this appeal, Case No. 13-cv-00941-RSP and Case No. 13-cv-00290-JRG.

STATEMENT OF THE ISSUES

CardSoft disagrees with Appellants' Statement of the Issues. The questions presented by this appeal are:

1. Whether the District Court correctly construed the claim term "*virtual machine*" as meaning "a computer programmed to emulate a hypothetical computer."

2. Whether the District Court correctly determined that CardSoft offered sufficient evidence to support the jury's verdict that the accused devices met every limitation of the asserted claims.

STATEMENT OF THE CASE

CardSoft disagrees with Appellants' Statement of the Case, which flouts the Rules of this Court and particularly the requirements of Rule 28 that the Statement of the Case "briefly indicat[e] the nature of the case, the course of proceedings, and the disposition below." Appellants instead offer some twenty-eight (28) pages of self-serving distortions, misrepresentations and outright irrelevancies and only two (2) pages purportedly describing the relevant claim construction and trial proceedings below.

Putting aside Appellants' sideshow of immaterialities and distractions, CardSoft submits the following Statement of the Case:

CardSoft filed its Complaint for Patent Infringement on March 6, 2008, accusing Defendant-Appellants VeriFone, Inc., Hypercom Corporation and VeriFone Systems Inc. (collectively "Appellants") of infringing the claims of U.S. Patent No. 6,934,945 ("the '945 patent") and U.S. Patent No. 7,302,683 ("the '683 patent"). (A102-83).

The District Court held a *Markman* hearing on July 29, 2011 and issued its Memorandum Opinion and Order construing the disputed claim terms on September 23, 2011 (A35-60).

A trial was held before a jury in the Eastern District of Texas, Marshall division, beginning on June 4, 2012. On June 8, 2012, the jury returned its verdict

finding that Appellants infringed claim 11 of the '945 patent and claim 1 of the '683 patent (A70-72).

Appellants subsequently filed motions for judgment as a matter of law and motions for a new trial, one of each on behalf of VeriFone, Inc. and VeriFone Systems Inc. (collectively "VeriFone") and one of each on behalf of Hypercom Corporation ("Hypercom") (A12237-66).

On September 30, 2013, the District Court issued a Memorandum Order denying VeriFone's motions for judgment as a matter of law and for a new trial. (A74-86). On October 28, 2013, the District Court issued a Memorandum Order denying Hypercom's motions for judgment as a matter of law and for a new trial. (A87-99).

On Dec. 3, 2013, Appellants filed an appeal to this Court.

STATEMENT OF THE FACTS

Appellants have not included a Statement of Facts as required by Rule 28. CardSoft therefore submits the following Statement of Facts that are relevant to the issues on appeal.

A. Electronic Point-of-Sale Devices

Electronic point-of-sale ("ePOS") devices are small computers which are used to conduct remote payment transactions, such as those that occur when purchasing something using a credit card or debit card. Once rare, over the past twenty years, these devices have become ubiquitous in our society.

The accused devices in this case are ePOS devices manufactured, sold and offered for sale by Appellants.

B. The Technology of the Patents-in-Suit

The '945 and '683 patents relate to ePOS devices. *See*, *e.g.*, A102-83 at col. 1:12-45. In particular, the '945 and '683 patents claim ePOS devices which comprise a "*virtual machine*" which includes: a "*virtual function processor and function processor instructions*"; "*message instruction means*"; and a "*virtual message processor*." *See*, *e.g.*, A139 at col. 50:48-67.

A key feature of the invention covered by the asserted claims of the patents-in-suit that was not found in prior art ePOS devices is the presence of a dedicated "*virtual message processor.*" *See* A13135-70. This "*virtual message processor*" is

a particular piece of software, such as a subroutine (a set of lines of computer code that can be implemented separately by the microprocessor in the device), that is called by the "*virtual function processor*" in response to an event, such as a card swipe, and is responsible for the handling of "*messages*" (*e.g.* information required to be input or communicated or displayed in order to enable the carrying out of a remote payment transaction).

The presence of such a dedicated "*virtual message processor*" enables the ePOS device to operate at a faster speed than it would otherwise if "*message*" handling were performed by the same software that controlled the basic operation of the device. *See* A119 at col. 9:37-45; A120 at col. 12:35-42. As can be easily imagined, this is an important feature to users of ePOS devices, since both customers and merchants prefer to conduct card transactions as quickly and efficiently as possible. The invention claimed in the patents-in-suit provides this benefit.

Moreover, the presence of the "*virtual message processor*" also represented an advance over other prior art ePOS devices in which "*message*" handling was performed by hardware, such as chips. By having "*message*" handling performed by software rather than hardware, the claimed "*virtual machine*" was portable (*i.e.* it could be implemented on devices having incompatible hardware, such as

different microprocessors). *See* A13135-70. This is yet another benefit of the invention claimed in the patents-in-suit.

C. The District Court's Markman Ruling

Following briefing from the parties and an in-person hearing, the District Court issued a Memorandum Opinion and Order on September 23, 2011, construing the disputed terms of the asserted claims of the patents-in-suit.

Among those disputed terms, the District Court construed "*virtual machine*" to mean "a computer programmed to emulate a hypothetical computer for applications relating to transport of data." (A48). Of significance to this appeal, the District Court declined to limit the "*virtual machine*" in the manner proposed by Appellants, *viz.* to only those devices that "process instructions expressed in a hardware/operating system-independent language." (A42-48).

D. The Trial and Post-trial Proceedings

A trial was held before a jury in the Eastern District of Texas between June 4 and June 8, 2012. On June 8, 2012, the jury returned a verdict finding that Appellants' accused ePOS devices infringed claim11 of the '945 patent and claim 1 of the '683 patent, the only claims asserted by CardSoft. (A70-72).

Appellants filed motions for a new trial and for judgment as a matter of law on July 20, 2012. On September 30, 2013, the District Court denied VeriFone's

motions and on October 23, 2013 denied Hypercom's motions. This appeal then followed.

E. CardSoft and CardScript

Appellants spend a significant number of pages of their Opening Brief describing their view of CardSoft as a business enterprise and its main commercial product, a software development kit known as CardScript. While encompassing a substantial amount of Appellants' Statement of the Case, this discussion has very little to do with the case now before this Court, except perhaps to prove that it is undisputed that Ian Ogilvy, the named inventor of the patents-in-suit, disclosed his inventions to the Appellants several years before this lawsuit was filed and encouraged them to adopt his various improvements over the prior art devices.

To the extent that Appellants are trying to suggest that only devices programmed using CardScript fall within the scope of the claims of the patents-in-suit, such a suggestion would be false since it ignores the language of the asserted the claims themselves, all of which require a particular software architecture and not the use of any particular programming language or tool. Whether a particular device was programmed using CardScript or some other language does not indicate one way or the other whether or not it comprises a "*virtual machine*" that includes a "*virtual function processor and function processor instructions*," "*message*

instruction means" or a "*virtual message processor*," much less whether it would meet the other limitations of the asserted claims.

Finally, Appellants' discussion of CardSoft and its success or failure as a business is simply irrelevant to the issues now before this Court - whether the District Court correctly construed the term "*virtual machine*" and whether it correctly denied Appellants' motions for judgment as a matter of law. Everything else is just Appellants' attempt to obfuscate those issues.

That the Defendants chose to misappropriate the novel software architecture of Ogilvy's "*virtual machine*," with its dedicated "*virtual message processor*," rather than to purchase CardSoft's software development kit does not somehow excuse or justify their infringement of the patents-in-suit. Quite to the contrary, had Appellants elected to fairly do business with Cardsoft, then they would have received a license to the patents-in-suit. They, however, decided not to and now must answer for that choice.

SUMMARY OF ARGUMENT

The District Court correctly construed the claim term "*virtual machine*" to mean "a computer programmed to emulate a hypothetical computer" based on the intrinsic evidence in this case, *viz.* the specification and claims of the patents-in-suit and their respective prosecution file histories. Appellants' contention that this Court has already determined an ordinary meaning for the term "*virtual machine*" as used in the claims of the patents-in-suit is not just legally erroneous, but also a gross misrepresentation of this Court's precedent. Moreover, Appellants' attempt to rely on new extrinsic evidence to try to contradict the more highly-relevant intrinsic evidence of record is legal error.

The District Court also correctly denied Appellants' respective motions for judgment as a matter of law. CardSoft proffered sufficient evidence, through Appellants' own documents, in addition to the testimony of CardSoft's expert and Appellants' employees and experts, for a reasonable jury to find that Appellants' accused devices met each and every limitation of the asserted claims, including the "*virtual machine*" limitation.

ARGUMENT

A. The District Court Correctly Construed the "Virtual Machine" Limitation of the Asserted Claims

1. There is No Judicially-Established Construction of the Term "Virtual Machine" as Used in the Asserted Claims

The fundamental error in Appellants' entire case manifests itself almost immediately upon delving into the argument section of their Opening Brief – Appellants ignore the intrinsic evidence relevant to claim construction, including the language of the asserted claims themselves, the common specification of the patents-in-suit and their respective prosecution file histories. Instead, Appellants advance a construction that they assert this Court established in some other case involving an entirely different, completely unrelated patent issued to another inventor altogether. Not only is Appellants' position legally unsound and in direct contravention of this Court's *en banc* precedent, but Appellants also grossly misrepresent this Court's holding in the case on which they purport to rely.

With respect to the latter, contrary to Appellants' argument, this Court has not previously construed the term "*virtual machine*" in the claim of any United States Letters Patent (much less the claims of the patents-in-suit). In *Nazomi Communications, Inc. v. ARM Holdings, PLC*, the case newly cited by Appellants as allegedly controlling, this Court reviewed a district court's construction of the term "*instruction*" as used in the claims of U.S. Patent No. 6,332,215 ("the '215

patent"). This Court did not, however, construe the term "*virtual machine*" in that case. Appellants' assertion that this Court "held that the ordinary meaning of 'virtual machine' is" anything (much less what Appellants contend) is manifestly untrue.[1]

With respect to the former, Appellants' entire approach to claim construction flies in the face of this Court's *en banc* holding in *Phillips v AWH Corp.*, 415 F.3d 1303(Fed. Cir. 2005) (*en banc*), regarding the paramount importance of intrinsic evidence, including the language of the claims, the specification and the prosecution file history. *See, e.g., O2 Micro Int'l Ltd. v. Beyond Innovation Technology Co., Ltd.*, 521 F.3d 1351, 1361 n.3 (Fed. Cir. 2008) ("We note, in passing, that the parties' claim construction arguments are fraught with problems . . . [including that] the parties' claim construction arguments appear to contain no support from the intrinsic record." (internal citations omitted)). Here, Appellants' attempt to establish a *per se* construction of "*virtual machine*" would relegate the intrinsic evidence to a secondary (at best) factor, if not obviating the need to

[1] Appellants' citations to *Nazomi Communications, Inc. v. Nokia Corp.*, 739 F.3d 1339, 1340 (Fed. Cir. 2014) ("*Nazomi II*") and *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir 2001) are similarly unavailing. In *Nazomi II*, this Court did not construe the meaning of the term "*virtual machine*" in the context of any patent claim, much less the asserted claims of the patents-in-suit, and *Microsoft* is not even a patent case. Appellants' attempt to create a judicially-established construction for "*virtual machine*" is not supported by any of the cases on which Appellants purport to rely. Appellants' attempt should therefore be summarily rejected.

consider it at all. That is precisely the approach rejected by this Court in *Phillips* and Appellants cannot point to a single case to the contrary.

Moreover, Appellants' suggestion that there could be some *de facto* established construction for a claim term regardless of what patent in which that term appeared, much less the specific language of the claims and specification thereof, was soundly rejected by this Court in *Harari v. Lee*, 656 F.3d 1331 (Fed. Cir. 2011). In *Harari*, the appellants asserted that, in a prior case involving different patents, this Court had previously established a *per se* rule of claim construction that the term "*a*" always meant one or more in open-ended "*comprising*" claims. *Id.* at 1341.

Rejecting that approach, *i.e.* that there are hard and fast judicially-established constructions for claim terms regardless of the patent in which they appear, this Court reiterated its holding that a disputed claim limitation is to be "read …in light of the claim and specification [of the patent-in-suit] to discern its meaning." *See Harari*, 656 F.3d at 1341 (internal citation omitted). Appellants' attempts here to rely on some prior alleged construction for "*virtual machine*" should be similarly rejected. When read in light of the language of the claims and

the description in the common specification of CardSoft's patents, the District Court's construction of "*virtual machine*" here is undeniably correct.[2]

2. The Language of the Claims and the Specification Both Support the District Court's Construction of "Virtual Machine"

This Court has repeatedly held that "the claims themselves provide substantial guidance as to the meaning of particular claim terms." *See Phillips*, 415 F.3d at 1314 (citations omitted). Here, the language of the claims themselves, both asserted and unasserted, shows that the District Court's construction of the claim term "*virtual machine*" was correct.

More specifically, Appellants repeatedly criticize the District Court for "conflating the virtual machine software with the [instructions] that the virtual machine runs." *See, e.g.*, Appellants' Opening Brief at 38. Appellants criticism, however, is wholly without merit.

The simple fact is the asserted claims of the patents-in-suit require a "*virtual machine*" that includes the following elements: a "*virtual function processor and*

[2] Even Appellants' attempted analogy regarding the term "automobile" as supposedly immediately bringing to mind a vehicle with four wheels fails to appreciate that those skilled in that art would know that Karl Benz's three-wheel 1885 Benz Patent Motorwagen was the first purpose-built automobile in history and the first to receive a patent as such. Thus, contrary to Appellants' suggestion, one skilled in the relevant art (and even some patent attorneys) would actually understand the scope of the term "automobile" as not limited to only vehicles with four wheels. Appellants' efforts to try and limit the scope of "*virtual machine*" are similarly flawed.

function processor instructions"; "*message instruction means*"; and a "*virtual message processor*". *See*, *e.g.*, A139 at col. 50:48-67. That is, the language of the asserted claims themselves requires that the instructions (*viz.* "*function processor instructions*" and "*message instruction means*") be a part of the claimed "*virtual machine*" and not something separate or distinct. Thus, the District Court's construction, rather than evidencing error, is fully consistent with, and indeed required by, the actual language of the asserted claims. Under this Court's precedent, there can be no stronger evidence that the District Court's construction of "*virtual machine*" was correct.

With respect to the common specification of the asserted patents, rather than focus on the specification's description of the various embodiments of Ian Ogilvy's invention (which actually describes, *inter alia*, the particular embodiments covered by the asserted claims), Appellants spend their time dwelling exclusively on one of the many problems found in the prior art that certain embodiments were intended to overcome. Appellants, however, utterly neglect the specification's description of the various embodiments of the invention, including the presently claimed embodiments.

For example, after the discussion of some of the problems with the prior art ePOS devices on which Appellants so heavily rely, in its first description of the actual claimed invention, the specification clearly states:

> From a first aspect the present invention provides a communications device which is arranged to process messages for communications, comprising a virtual machine means which includes a virtual function processor and function processor instructions for controlling operation of the device, and a virtual message processor . . . .

See A116 at col. 3:56-61 (emphasis added). Appellants' contorted arguments cannot overcome the plain and unambiguous language of the specification — the inventive "*virtual machine*" includes "*function processor instructions*," *i.e.*, the "*function processor instructions*" are not separate or distinct from the "*virtual machine*," as Appellants repeatedly argue, but rather are a necessary part of the "*virtual machine*" as claimed.

The common specification of the patents-in-suit therefore does not support Appellants' proposed construction, which would require the function processor instructions to be separate from the virtual machine. Quite to the contrary, the specification repudiates Appellants' proposed construction unequivocally — whether Appellants like it or not, the "*virtual machine*" of the asserted claims necessarily includes "*function processor instructions*" (*i.e.* Appellants' "application").

And since Appellants do not dispute that the claimed "*virtual machine*" can be written in platform-specific code (*see*, *e.g.*, Appellants' Opening Brief at 52), then it necessarily follows that "*function processor instructions*" and "*message instruction means*" can also be written in platform-specific code (since they are

component parts of the "*virtual machine*" according to the asserted claims). Appellants' arguments to the contrary, *viz.* that "*function processor instructions*" and "*message instruction means*" must be written in some specific, but unidentified, hardware-and-software-independent code, are nonsense.

Indeed, the common specification of the patents-in-suit expressly discloses that the "*message instruction means*" written by a programmer in one language "<u>are preferably subsequently converted to code</u> and downloaded into the device which is to employ them with the virtual machine." *See, e.g.*, A117 at col. 6:47-49 (emphasis added). Appellants' proposed construction would exclude this preferred embodiment from the scope of the claims.

The intrinsic evidence in this matter — the language of the claims and of the common specification of the patents-in-suit — does not support Appellants' proposed construction, which would exclude "*function processor instructions*" and "*message instruction means*" from being components of the "*virtual machine*" and, instead, require them to be written in a completely different programming language than the other components of the claimed "*virtual machine*" (*i.e.* a "*virtual function processor*" and a "*virtual message processor*"). Rather, the language of the claims and the specification support the District Court's construction of "*virtual machine*" as used in the asserted claims of the patents-in-suit.

3. The Prosecution File Histories Support the District Court's Construction of "Virtual Machine"

Appellants similarly ignore relevant statements from the prosecution file histories of the patents-in-suit, particularly the '945 patent or, perhaps worse, attempt to misconstrue the file history to try to support their arguments.

First, Appellants ignore statements in the prosecution file history that show that the District Court correctly understood the "*virtual machine*" of the asserted claims to include, *inter alia*, "*function processor instructions*" and "*message instruction means*" (*i.e.* Appellants' "applications"). For example, in the very response on which Appellants purport to rely so heavily and from which they have selectively quoted, counsel for CardSoft expressly informed the examiner that

> As recited in Claim 1 (now further amended), the claimed Virtual Machine Means comprises, inter alia, (1) the virtual function processor, (2) the message instruction means, and (3) the virtual message processor . . . .

See PH, 10/14/04 Response at p. 9 (emphasis added) (A18964).

No matter how much they might wish to, Appellants simply cannot ignore the fact that CardSoft expressly informed the examiner (and, concomitantly, the relevant public) that its "*virtual machine*" included "*message instruction means*" (as well as "*function processor instructions*" as discussed above).

Second, Appellants ignore the fact that CardSoft expressly informed the examiner, and the relevant public, that this inclusion of "*message instruction*

means" as a part of the claimed "*virtual machine*" was a distinguishing factor between the claimed invention and the prior art, including the Java Virtual Machine that Appellants repeatedly invoke. *See id.* ("The presently claimed virtual machine is not just a JavaOS or a Java Virtual Machine. . . ."). Thus, even if one skilled in the art may have understood that a Java Virtual Machine did not include "applications" being run on it, as repeatedly asserted by Appellants, that same skilled worker would have understood from the specification and prosecution history of the patents-in-suit that CardSoft's claimed "*virtual machine*" did, in fact, include both "*message instruction means*" and "*function processor instructions*."

It should be noted that Appellants constant and repeated references to "applications" run by the claimed "*virtual machine*" are little more than unsupported attorney argument and an attempt to re-write the asserted claims to conform to their now thrice-rejected theory of non-infringement. The term "application" simply does not appear anywhere in any of the claims of either of the patents-in-suit, whether asserted or non-asserted (a point the District Court clearly recognized, as evidenced by the discussion on page 12 of its claim construction order. *See* A16). Appellants cannot change this just to suit their needs in this appeal.

The reason that "application" does not appear in any of the claims of the patents-in-suit is because the claimed invention is, and always has been, a "*virtual*

machine" that included, *inter alia*, a dedicated "*virtual message processor*" (*i.e.* a specific software subroutine that just handles "*messages*" and is not involved with overall operation of the device). *See* A13135-70. It was this claimed architecture that the examiner found novel and non-obvious, and not the particular language in which a given software subroutine was written or whether it appeared in software regarded as part of the "operating system" or an "application" or both. *See* Reasons for Allowance. (A18977-78).

Finally, in a last-ditch attempt to save their argument, Appellants self-servingly embellish and distort certain remarks from the prosecution history. More specifically, Appellants focus on selective remarks made to distinguish the claimed invention and a prior art United States patent to Stern *et al*. ("Stern"), and particularly prosecution counsel for CardSoft stating that the claimed device was "significantly different" from Stern because of the presence of a "*virtual message processor*." *See, e.g.*, Appellants' Opening Brief at 50-51.

Just because prosecution counsel focused on this particular difference in asserting patentability, however, does not mean that it is the only difference between the claimed invention and the devices disclosed by Stern. Appellants are making an assumption, and asking this Court to do the same, when the record does not support that assumption, much less render it inevitable as Appellants seem to hope.

At no point in time did CardSoft ever take the position that the claimed "*virtual machine*" did not include "*function processor instructions*" or "*message instruction means*" as Appellants continue to urge. Nor did CardSoft ever even suggest, much less advocate, that either "*function processor instructions*" or "*message instruction means*" must be written in some specific hardware-and-software-independent language.

Indeed, although not mentioned by Appellants, prosecution counsel for CardSoft also pointed to Stern's use of hardware (chips) to achieve the functions of a "*message processor*" while the claimed "*virtual machine*" did so using software instead of hardware. *See* A18959 Office Action response dated July 14, 2004 at 4. In fact, it was this feature that made the claimed "*virtual machine*" portable, *viz.* the use of software rather than chips, and not Appellants' hardware-and-software-independent language. *See id.*

Quite obviously, Appellants are trying to distort the prosecution history to argue that CardSoft somehow conceded that the claimed "*virtual machine*" operates in the same way as a Java Virtual Machine. Such a conclusion is not, however, supported by the portions of the prosecution history on which Appellants purport to rely, much less the prosecution history as a whole (particularly when considered with the language of the claims and the common specification of the patents-in-suit).

4. The District Court's Reasons Were Sound

(a) The District Court Correctly Understood That the Claimed Virtual Machine Included Both Function Processor Instructions and Message Instruction Means

Appellants boldly contend that "[t]his is the rare case where the cause the error below is easy to discern. Although the magistrate gave several reasons for rejecting [Appellants'] proposed construction, each follows from the same simple logical error: a failure to distinguish between the virtual machine itself and the applications written to run on the virtual machine." *See* Defendants-Appellants Opening Brief at 51; 53-54 ("time and again, the magistrate failed to distinguish between the virtual machine 'processors' and the 'instructions' that run on the virtual machine.").

Appellants' purported "logical error," however, is theirs, and not the District Court's. The District Court did not err in considering "*message instruction means*" and "*function processor instructions*" to be part of the claimed "*virtual machine*" because that is exactly what the asserted claims actually require. (A139 at col. 50:48-67).

All of the asserted claims of the patents-in-suit expressly recite that the "*virtual machine*" includes the following: a "*virtual function processor and function processor instructions;*" "*message instruction means;*" and a "*virtual message processor*." *Id.* This is the language of the claims themselves, as can be

seen from even the most cursory examination. For the District Court to rely on this was hardly error as suggested by Appellants; quite to the contrary, the District Court's construction of the claim terms complied fully with this Court's *en banc* precedent.

Appellants' reliance on common Figure 2 of the patents-in-suit is misplaced. As even a cursory comparison of Figure 2 to the asserted claims of the patents-in-suit shows, Figure 2 is directed to a different embodiment than that covered by asserted claim 11 of the '945 patent and asserted claim 1 of the '683 patent.

For example, Figure 2 includes a protocol processor **106** as one of three virtual processors. The asserted claims of the patents-in-suit, however, require only two virtual processors — a "*virtual function processor*" and a "*virtual message processor*; the embodiment depicted in Figure 2 is plainly the subject of different, non-asserted claims (*e.g.* claims 2-4 of the '945 patent). (A140 at col. 51:1-17).

Similarly, the selected portion of the specification on which VeriFone attempts to rely states that the "*virtual machine*" also includes a hardware abstraction layer ("HAL") and hardware drivers. As Appellants have previously admitted, however, claim 1 of the '945 patent does not include a HAL or hardware drivers as part of the "*virtual machine*." (A16660; A16668; A16669). Appellants

are again trying to rely on a different embodiment than that claimed in the asserted claims.

It is wholly improper for Appellants to attempt to import aspects of one preferred embodiment into claims that are clearly directed to a different, distinct preferred embodiment, such as asserted claim11 of the '945 patent and claim 1 of the '683 patent. Such an attempt completely ignores the teachings of the common specification, particularly the fact that it describes a number of different preferred embodiments and not a single embodiment as Appellants would seem to suggest.

Moreover, even if Figure 2 were the only embodiment disclosed by the specification (which it most emphatically is not), it would still be improper to limit the claims in the manner proposed by Appellants. This Court has, on more than one occasion, held that the claims of a patent cannot be construed as being limited to a particular embodiment even if that is the only embodiment actually disclosed in the specification. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) ("Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'" (internal citations omitted)).

(b) The District Court's Use of the Doctrine of Claim Differentiation Was Proper

Similarly unfounded is Appellants' criticism of the District Court's discussion of the doctrine of claim differentiation in determining that the "*function processor instructions*" and "*message instruction means*" could be written in either hardware-dependent code or hardware-independent code. In this case, the District Court looked to dependent claims 7 and 8, which recite, respectively, that the "*message instruction means*" and "*function processor instructions*" do not have to be translated into the native code of the hardware present in the claimed device. Thus, those terms should not be so limited in independent claim 1.

As this Court has held, under the doctrine of claim differentiation, the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim. *See, e.g., See Liebel-Flarsheim*, 358 F.3d at 910, *citing Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001); *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). Although that presumption can be overcome if the circumstances suggest a different explanation, or if the evidence favoring a different claim construction is strong, it has and continues to remain un-rebutted in this case.

This Court has expressly held that, "[i]n such a setting, where the limitation that is sought to be 'read into' an independent claim already appears in a dependent

claim, the doctrine of claim differentiation is at its strongest." *See Liebel-Flarsheim*, 358 F.3d at 910 (emphasis added), *citing Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302-03 (Fed. Cir. 2003) (the presumption that an independent claim does not have a limitation that is introduced for the first time in a dependent claim "is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim"); *Wenger*, 239 F.3d at 1233 ("Claim differentiation . . . is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims.").

As discussed at length above, the language of the claims themselves, the common specification of the patents-in-suit and their respective prosecution file histories, *i.e.* the intrinsic evidence, all support the District Court's construction of the term "*virtual machine*" as used in the asserted claims. Appellants have therefore failed to rebut the presumption created under the doctrine of claim differentiation. Appellants' assertions of error by the District Court are wrong.

(c) The District Court Applied the Correct Legal Standards for Claim Construction

Unlike Appellants in their Opening Brief, the District Court below did, in fact, apply the correct legal standards for claim construction in determining the meaning of "*virtual machine*" as used in the asserted claims of the patents-in-suit. That is, unlike Appellants, the District Court focused on the intrinsic evidence, *viz.* the language of the claims, the common specification and the prosecution file histories, in correctly determining that the claimed "*virtual machine*" included, as component parts thereof, "*function processor instructions*" and "*message instruction means.*"

This is precisely the analysis mandated by this Court sitting *en banc*. *See Phillips*, 415 F.3d at 1318-19. And, in accord with its construction of "*virtual machine*" and considering that same intrinsic evidence, the District Court also correctly determined that neither those "*function processor instructions*" nor those "*message instruction means*" were limited to software written in some hypothetical hardware-and-software-independent language as asserted by Appellants.

Appellants' suggestion that the District Court improperly applied the approach from *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002) is plainly not supported by the record here. Neither party cited *Texas Digital* in its claim construction briefing and, in the more than five (5) pages describing its understanding of the principles governing claim construction and particularly the

guidelines established by this Court in *Phillips*, the District Court never even mentioned *Texas Digital.* *See* A36-42. And since it is not cited anywhere in the District Court's seventeen (17) pages of analysis and construction of the disputed claim terms, the District Court clearly did not rely on *Texas Digital* either.[3] *See* A42-59.

The *Texas Digital* Court incorrectly held that it must be "compelled" to divert from the ordinary meaning, which it determined from extrinsic evidence and not intrinsic evidence. *See* 308 F.3d at 1202. Here, however, the District Court determined the meaning of "virtual machine" using the language of the claims and the specification and found that the portion(s) of the specification cited by Appellants did not compel a contrary construction. That is far different from what this Court criticized in *Texas Digital*. *See Phillips*, 415 F.3d at 1320. Here, the specification expressly defines "*virtual machine*" as a "computer programmed to emulate a hypothetical computer." (A116, col. 3:40-41). The District Court's construction is correctly based upon the patentee's explicit definition of virtual machine. Conversely, the specification does not once mention (a) that any part of

[3] In fact, the only similarity between *Texas Digital* and this case would appear to be merely the use of the word "compel" by both district courts. And it cannot rationally be argued that this Court forbade all uses of the word "compel" in orders construing disputed claim terms.

the virtual machine must be written in hardware-and-software-independent language; or (b) that the "instructions" must be separate from the virtual machine.

In fact, it is only Appellants that seek to determine the ordinary meaning of "virtual machine" via extrinsic evidence. In other words, Appellants are attempting to apply *Phillips* to reject the specification's explicit definition of "virtual machine" in favor of unclear extrinsic evidence. Appellants' argument turns the law on its head.

5. Defendant-Appellants Are Not Entitled to a Non-infringement Ruling

Appellants argue that, under their construction of "*virtual machine*," "a ruling of noninfringement [sic] is compelled." Because Appellants' construction of "*virtual machine*" is wrong, however, for at least the reasons above, the jury's unanimous verdict of infringement, and the District Court's subsequent denial of Appellants' respective motions for judgment as a matter of law, should be affirmed.

More specifically, the evidence at trial showed that Appellants' accused devices contained a "*virtual machine*" that included a "*virtual function processor and function processor instructions*," "*message instruction means*" and a "*virtual message processor*." Those were, *inter alia*, the elements required by CardSoft's asserted claims, regardless of what language may have been used to write these software modules and regardless of whether or not they were compiled or

translated into another language. The asserted claims are not so limited, and so such cannot be a basis for a finding of non-infringement as now argued by Appellants.

B. The District Court Correctly Denied Appellants' Respective Motions for Judgment as a Matter of Law

The Fifth Circuit reviews a District Court's denial of JMOL *de novo,* applying the same standard as the court below. *See, e.g.*, *Evans v. Ford Motor Co.*, 484 F.3d 329, 334 (5th Cir. 2007). Thus, the court is to be "especially deferential" to a jury's verdict and can only reverse that verdict if it is not supported by substantial evidence. *See, e.g., Baisden v. I'm Ready Productions, Inc.*, 693 F.3d 491, 499 (5th Cir. 2012).

Under Fifth Circuit law, a motion for judgment as a matter of law must be denied unless "the facts and inferences point so strongly and overwhelmingly in favor of the moving party [that] no reasonable jurors could have arrived at a contrary verdict." *Conner v. Travis Cty.*, 209 F.3d 794, 796 (5th Cir. 2000)(internal citation omitted).

When considering a motion for judgment as a matter of law, the Court must "review all of the evidence in the record, drawing all reasonable inferences in favor of the nonmoving party . . . ." *Brennans, Inc. v. Dickie Brennan & Co., Inc.*, 376 F.3d 356, 362 (5th Cir. 2004). And the Court "must disregard all evidence favorable to the moving party that the jury is not required to believe." *Reeves v.*

Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150 (2000); *see also Evans*, 484 F.3d at 334.

1. CardSoft Proffered Sufficient Evidence to Show that the Accused Devices "Emulate a Hypothetical Computer"

Appellants baldly contend that "CardSoft's affirmative case consisted of the testimony of a single witness, Tipton Cole, CardSoft's technical expert." *See* Appellants' Opening Brief at 66. Such a contention, however, is belied by even the most cursory examination of the trial record. Indeed, Appellants completely mischaracterize the trial.

Moreover, a review of the trial transcript plainly shows that CardSoft presented to the jury the sworn testimony of Appellants' designees pursuant to Fed. R. Civ. Proc. 30(b)(6) regarding the operation and programming of the accused devices. These included David Faoro by video deposition and Paul Rasori live. (A17065-96; A17489-565).

In addition, CardSoft proffered a substantial number of exhibits at trial, including Appellants' own documents, regarding the operation and programming of the accused devices, as well as selected portions of the actual code used on those devices. *See, e.g.*, A19172-19986. The significance that these exhibits likely played in the jury's verdict cannot be over-emphasized, particularly since the jury specifically requested to have most of them brought back during their deliberations. *See* A18273-79.

This evidence that CardSoft presented to the jury was more than sufficient for a reasonable jury to conclude that the accused devices met the "*virtual machine*" limitation of the claims, even without Mr. Cole's testimony. That is, the evidence proffered by CardSoft showed, and still does, that accused devices are programmed to be capable of running the same program even though they contain incompatible hardware. That was all that was necessary for a reasonable jury to find that those accused devices are programmed to emulate the same hypothetical computer and therefore met the "*virtual machine*" limitation. *See, e.g.*, A116 at col. 3:43-46 ("Any computer programmed to emulate the hypothetical computer will thus be capable of executing programs for the virtual computer.").

2. The Accused Devices Emulate Hypothetical Computers

Appellants' argument on page 71 of their Opening Brief that "the accused terminals are actual, not hypothetical, computers" is simply non-sensical. There is no debate that the accused devices are actual machines, containing semiconductor chips and the like. But that does not change the fact that these actual machines are programmed to operate and function like the same computer. And such was confirmed by Appellants' own witnesses, including David Faoro, VeriFone's corporate designee on the programming of the accused devices. *See*, *e.g.*, A17065-96.

Appellants place great emphasis on the testimony of Paul Rasori, VeriFone's corporate witness who testified live at trial, that applications written for one VeriFone operating system, such as Verix eVo, cannot run on VeriFone devices using a different operating system, such as Verix V. *See* Appellants' Opening Brief at 71 ("Rasori testified that 'an application that's developed for a Verix eVo operating system' cannot work on a Verix V operating system."). But Appellants fail to mention that CardSoft directly rebutted this testimony, and showed it to be false, through VeriFone's own documents, such as A19138-71 at 31-32 which describes how exactly the same application can be run both on devices using Verix V and on devices using Verix eVo, even after being compiled. Given that Mr. Rasori's testimony was clearly and unambiguously contradicted by VeriFone's

own documents, including its technical guides and instructional manuals, the jury was free to disregard his testimony as not credible.

Moreover, following Appellants' submission of their respective motions for judgment as a matter of law, the District Court thoroughly analyzed the record in this case and correctly determined that the jury's verdict was fully supported by the evidence. This included a review of the evidence that CardSoft presented to show that Appellants' devices met the "*virtual machine*" limitation of the claims, both from its own witnesses and from Appellants' witnesses. *See, e.g.* A74-86.

Finally, Appellants' argument that "[i]f that is all it takes to show a 'hypothetical computer,' then practically any modern computer would potentially infringe the '945 patent" underscores the fundamental flaw in their Opening Brief — Appellants have failed (yet again) to consider the actual language of the asserted claims themselves. In this particular instance, Appellants are ignoring the fact that the "*virtual machine*" claimed in all of the claims of both patents-in-suit, among other requirements, must at least process "*messages*" for "*communications*" and do so using a dedicated "*virtual message processor*." Plainly, not every modern computer will meet those limitations, regardless of whether it "interface[s] with applications and hardware and provide[s] other 'similar functionality' in important respects." Appellants' attempted analogy fails once again, as does their entire argument.

CONCLUSION

The District Court correctly construed the meaning of the term "*virtual machine*" as used in the asserted claims of CardSoft's patent-in-suit, relying on the intrinsic evidence relevant to claim construction, including the language of the claims themselves, the common specification of the patents-in-suit and their respective prosecution file histories.

The District Court also correctly denied Appellants' respective motions for judgment as a matter of law. CardSoft proffered sufficient evidence for a jury to find that the accused devices met each and every limitation of the asserted claims of the patents-in-suit and, therefore, infringed those claims.

The District Court's denial of Appellants' Motions for Judgment as a Matter of Law should be affirmed.

Dated: May 7, 2014

Respectfully submitted,



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CERTIFICATE OF SERVICE

The foregoing non-confidential Responsive Brief of Plaintiff-Appellee CardSoft (Assignment for the Benefit of Creditors), LLC was electronically filed with the Clerk of the Court for the U.S. Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on May 7, 2014. All participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Dated: May 7, 2014

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CERTIFICATE OF COMPLIANCE
UNDER FEDERAL RULES OF APPELLATE PROCEDURE
32(A)(7) AND FEDERAL CIRCUIT RULE 32

The undersigned hereby certifies that the foregoing Principal Brief of Plaintiff-Appellee CardSoft (Assignment for the Benefit of Creditors), LLC contained herein has a proportionally spaced 14-point typeface, and contains 6,893 words, based on the "Word Count" feature of Word 2007, including footnotes and endnotes. Pursuant to Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b), this word count does not include the words contained in the Certificate of Interest, Table of Contents, Table of Authorities, and Statement of Related Cases.

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