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RECENT DEVELOPMENTS IN CLAIM CONSTRUCTION

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I. Introduction

Claim construction remains the bedrock providing essential foundation to the two principal considerations in every litigation/contested matter involving U.S. patents: the infringement and the validity of the claims in issue. Claim construction is also part and parcel of every USPTO proceeding under its “broadest reasonable construction in view of the specification to one of ordinary skill in the art,” claim construction rubric, particularly in the new USPTO post grant IPR/PGR/CBMR procedures, where the petitioner is required to provide (at least a limited) claim construction as part of its petition seeking PTAB review. *See* 37 C.F.R. § 42.104(b).

Once more, the latest jurisprudence of the United States Court of Appeals for the Federal Circuit (“Federal Circuit”) and its overseeing court, the United States Supreme Court has, while - possibly surprisingly - maintaining the *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*), over-arching methodology intact (even insofar as the PTAB is usually concerned), has made major changes in the rules of the road. Taken with the substantial shift in Federal Circuit judges to a new generation, much has been altered.

II. General Rules of Claim Construction

The substantive basics to correctly carry out claim construction continue as stated in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). Intrinsic evidence - the specific claim whose term(s) are in issue, other claims, the specification and the prosecution history (file wrapper) - controls claim construction, with extrinsic evidence - including expert testimony and dictionaries - continuing in its secondary role.

The Federal Circuit recently reaffirmed basic claim construction principles in *CardSoft, LLC v. VeriFone, Inc.*, 769 F.3d 1114 (Fed. Cir. 2014). The court applied a broad range of tools from the *Phillips v. AWH Corp.*, to arrive at its interpretation, reversing the trial court.

The asserted patents (including U.S. Patent No. 6,934,945 (“the ‘945 patent”)) describe software for controlling a payment terminal. The problem in the prior art was the variation in payment terminals, which used different hardware/software architectures. The variety of architectures required that each application program for a payment terminal be written expressly for the given terminal, meaning” [p]rogramming alterations are not ‘portable’ between different types of devices.” *CardSoft*, 769 F.3d at 1116 (quoting ‘945 patent, col. 3 ll. 13-14). The patents-in-suit taught an improved “virtual machine” acting as an “interpreter” between an application program (like a merchant’s payment-processing software) and the terminal’s hardware systems. *Id.* “Instead of writing a payment processing application for a particular hardware configuration or operating system, a developer can write the application for the virtual machine,” making it portable across systems. *Id.* (citing ‘945 patent, col. 3 ll. 41-45). The improved “virtual machine” of the patents-in-suit included a specialized “virtual message processor” designed to optimize network communications, and a “virtual function processor” designed to optimize control of the payment terminal itself. *Id.*

CardSoft sued VeriFone and others for patent infringement in March 2008. *Id.* Having held a *Markman* hearing, the trial court construed “virtual machine” - a term found in all the as-

serted claims - as “a computer programmed to emulate a hypothetical computer for applications relating to transport of data.” *Id.* at 1117 (quoting *CardSoft, Inc. v. VeriFone Holdings, Inc.*, No. 2:08-cv-98, 2011 WL 4454940, at *8 (E.D. Tex. Sept. 29, 2011)). The trial court thus found that the claimed “virtual machine” need not run applications or instructions that are hardware or operating system independent.

Subsequent to trial in June 2012, the jury determined under the court’s construction that VeriFone infringed two valid claims of the patents-in-suit. VeriFone appealed the trial court’s construction of “virtual machine,” arguing before the Federal Circuit that the trial court erred by not requiring the claimed “virtual machine” to include the limitation that “the applications it runs are not dependent on any specific underlying operating system or hardware.” *Id.*

The Federal Circuit panel noted that the trial court’s claim construction was “correct, but incomplete.” *Id.* “The trial court improperly rejected the Appellants’ argument that the ‘virtual machine’ must ‘process[] instructions expressed in a hardware/operating system-independent language.” *Id.* (alteration in original) (quoting *CardSoft*, 2011 WL 4454940, at *7).

The court came to this conclusion by first noting that the problem in the prior art, as described by the specification, was that applications were hardware or operating system dependent. *Id.* The court found a “virtual machine” was taught to solve this problem that “creates a complete portable environment,” which “allows programs to operate independent of processor” and allows “[d]ifferent arrangements of hardware [to] be controlled by the same application software.” *Id.* (alterations in original) (quoting ‘945 patent, col. 3 ll. 34-46; col. 10 ll. 5-7).

Recognizing that it can also be appropriate to use extrinsic evidence to determine a term’s meaning, the court found that Sun Microsystems, Inc. released the Java “virtual machine” in 1996—well before the priority date of the patents-in-suit—and advertised it as allowing a developer to “write once, run anywhere.” *Id.* (quoting *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1348 (Fed. Cir. 2014)). **During prosecution, the applicant explained that the asserted patents use the term “virtual machine” in the same way Sun did—the patents here further optimize the virtual machine for use on a payment terminal.** *Id.* at 1117-18.

The Federal Circuit rejected CardSoft’s arguments supporting the trial court’s construction. First, CardSoft argued that the structure of the claims dictates a broader meaning because they “include” certain “instructions” in the virtual machine, suggesting they can also be operating system or hardware dependent. *Id.* at 1119. But, according to the court,

this conflates the virtual machine itself with applications (or instructions) running on the virtual machine. The defining characteristic of a virtual machine was, and is, that it acts as an interpreter between applications and the underlying hardware or operating system. That the claimed virtual machine “includes” applications, in the sense that it acts as an interpreter for applications, does not mean that the applications can be hardware or operating system dependent. Such a construction would leave “virtual machine” essentially meaningless

Id.

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