IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SHOPIFY INC. AND SHOPIFY (USA), INC. Plaintiffs and Counterclaim Defendants, v. EXPRESS MOBILE, INC., Defendant and Counterclaim Plaintiff.	Civil Action No. 19-439-RGA

MEMORANDUM ORDER

This is a patent case about website design tools. Shopify, Inc. and its U.S. subsidiary seek declaratory judgment of non-infringement of the patents belonging to Express Mobile, Inc., which has filed a counterclaim of infringement. Currently before me is the issue of claim construction of various terms in those patents: U.S. Patent Nos. 6,546,397 ('397 patent), 7,594,168 ('168 patent), 9,063,755 ('755 patent), 9,471,287 ('287 patent), and 9,928,044 ('044 patent). The matter has been briefed (D.I. 117), and I heard oral argument on May 20, 2020 (D.I. 128). The terms are construed as set out below.

I. BACKGROUND

The specifications of the '397 and '168 patents are substantively identical, and the specifications of the '755, '287, and '044 patents are substantively identical.

The '397 patent family describes a browser-based tool for building webpages. ('397 patent at 1:6-8). The designer can make selections on various menus, and the system can preview

what the page will look like. (*Id.* at Abstract, 2:32-37). The data relating to the webpage is stored in an external database. (D.I. 120-1, Ex. 1, "Schmandt Decl," ¶ 52). When an end user accesses the webpage, the user's browser downloads a "run time engine" that is executed by a "virtual machine." (*Id.* ¶ 53). The run time engine retrieves data from the external database and uses that data to display the webpage. (*Id.*). According to the specification, this technique is superior to "conventional web site construction tools," which were not designed for "serious multimedia applications" and can be "remarkably slow and inefficient." ('397 patent at 1:11-21).

The '755 patent family is specifically directed to displaying content on mobile devices, such as smartphones. ('755 patent at Abstract). The inventions enable designers to integrate third-party web services into their content. (Schmandt Decl ¶ 55). The patent family discloses an authoring tool that allows designers to customize the display for receiving inputs and displaying outputs of web services. (*Id.*). Additionally, the patents disclose the concept of providing two sets of code to a user's device: an "Application" and a "Player." (*Id.* ¶ 58). The advantage of this system is that "all of the device-dependent programming is provided to the device only once (or possibly for some small number of upgrades), permitting a smaller Application, which is the same for each device." ('755 patent at 5:52-55).

II. LEGAL STANDARD

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc),

aff'd, 517 U.S. 370 (1996). Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (internal quotation marks omitted).

"[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312–13 (citations and internal quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317–19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

III. CONSTRUCTION OF DISPUTED TERMS

1. "virtual machine" ('397 and '168 patents)

   a. *Express Mobile's Construction*: "abstract machine emulated in software"

   b. *Shopify's Construction*: "abstract machine that is emulated in software and that executes intermediate code in the instruction set of that machine"

   c. *Court's Construction*: "software that emulates a physical machine"

The parties agree that a "virtual machine" is a software program that emulates the functions of a physical machine. Shopify seeks the additional limitation that the machine "executes intermediate code in the instruction set of that machine."

There is little intrinsic evidence on the meaning of this term. The specification refers to a "virtual machine" only once, identifying a "Java Virtual Machine" in the descriptions of drawings. ('397 patent at 35:34-38). According to Shopify, a Java virtual machine (JVM) uses Java bytecode, which is a type of intermediate code. (D.I. 117 at 10). That may be so. But the "Java Virtual Machine" mentioned in the specification is clearly just one possible embodiment, not the invention itself. It is improper to "import a feature from a preferred embodiment into the claims." *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 805 (Fed. Cir. 2007).

In *X.Commerce, Inc. v. Express Mobile, Inc.*, the court rejected the similar argument that this claim term is limited to "compiled code." WL 10704439, at *3 (N.D. Cal. Sept. 12, 2018). The court concluded that although "the specification was drafted to explain the invention in the context of the JVM, the then-dominant virtual machine in the particular technological context, . . . [i]t simply does not follow . . . that the patent claims are limited to virtual machines that execute

compiled code." I agree, and I see no reason that "executes intermediate code in the instruction set of that machine" should be any different. I therefore reject Shopify's proposed construction.

I construe this term as "software that emulates a physical machine" because I believe it will be easier for a jury to readily understand than "abstract machine emulated in software," which could lead to unnecessary confusion around the word "abstract." Express Mobile's counsel indicated at oral argument that Express Mobile had no objection to this construction. (D.I. 128 at 12:18-23).

2. "run time engine" ('397 and '168 patents)

a. *Express Mobile's Construction*: "file that is executed at runtime that facilitates the retrieval of information from the database and generates commands to display a web page or website"

b. *Shopify's Construction*: "file that is executed at runtime that reads information from the database and generates virtual machine commands to display a web page or website"

c. *Court's Construction*: "file that is executed at runtime that reads information from the database and generates commands to display a web page or website"

The parties have two disputes about this term. First, they dispute whether the run time file "reads" information or merely "facilitates the retrieval of information." Second, they dispute whether the run time file generates "virtual machine commands" or just "commands."

As to the first dispute, the specification repeatedly describes the run time engine as "read[ing]" information from the database. (*See* '397 patent at 5:52-57, 45:44-57). Admittedly, these references appear in descriptions of embodiments, but there is no intrinsic support for Express Mobile's argument that the run time engine "facilitates the retrieval of information." That wording is also needlessly vague. *See X.Commerce*, 2018 WL 10704439, at *3 (finding that

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