2018-1574

United States Court of Appeals for the Federal Circuit

INTERNATIONAL BUSINESS MACHINES CORPORATION,

Plaintiff-Appellant,

– v. –

BOOKING HOLDINGS INC., fka Priceline Group Inc., KAYAK SOFTWARE CORPORATION, OPENTABLE, INC., PRICELINE.COM LLC,

Defendants-Appellees.

On Appeal from the United States District Court for the District of Delaware, Case No. 1:15-cv-00137-LPS, Chief Judge Leonard P. Stark

PETITION FOR REHEARING EN BANC BY APPELLANT INTERNATIONAL BUSINESS MACHINES CORPORATION

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JULY 22, 2019

CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rules 47.4 and 35(c)(1), undersigned counsel for appellant certifies the following:

1.   The full name of every party or amicus represented by me is International Business Machines Corporation.

2.   The name of the real party in interest represented by me is the same.

3.   No publicly held company owns 10% or more of International Business Machines Corporation's stock.

4.   The following attorneys appeared for appellee in proceedings in the district court or are expected to appear in this Court:

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/s/ Karim Z. Oussayef
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July 22, 2019

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STATEMENT OF COUNSEL

Based on my professional judgment, I believe this appeal requires an answer to a precedent-setting question of exceptional importance: whether an entity performs a method step by causing third-party hardware or software to perform that method step on a remote device.

Based on my professional judgment, I believe the panel decision holding that an entity does not perform a method step in those circumstances is contrary to the following decisions of the Supreme Court and the precedents of this Court: *Limelight Networks, Inc.* v. *Akamai Technologies, Inc.*, 572 U.S. 915 (2014); *Akamai Technologies, Inc.* v. *Limelight Networks, Inc.*, 797 F.3d 1020 (Fed. Cir. 2015); *Ericsson, Inc.* v. *D-Link Systems, Inc.*, 773 F.3d 1201 (Fed. Cir. 2014); *SiRF Technology, Inc.* v. *International Trade Commission*, 601 F.3d 1319 (Fed. Cir. 2010).

KARIM Z. OUSSAYEF
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INTRODUCTION

This Court has long acknowledged that the essential question in determining infringement of a method claim is *who* performs the method steps by causing them to occur. In this case, however, the panel majority ignored that principle, holding that an entity did not perform the claimed step even though it plainly caused that step to occur by sending software instructions that were automatically carried out on the end user's equipment (without any intervention by that user or any other third party).

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The panel reached that conclusion by looking to *what* components were involved, instead of *who* caused the step. The Court should rehear this case en banc to consider the profound implications of permitting an entity that causes a method step to occur to avoid liability simply by calling on third-party hardware or software components to follow its instructions.

STATEMENT

1.   This case concerns a method for presenting applications and advertisements on a user's computer system through an interactive network. Appx124. IBM developed and patented that technology in the late 1980s as part of its efforts to launch the PRODIGY online service, a precursor to the World Wide Web. Appx167-168. Under conventional standards at the time, advertising data needed to be downloaded each time a user accessed new content. Appx142, Appx167-168. The claimed method departed from that norm by "caching" some of those data—*i.e.*, storing the advertising data locally on a user's machine. *See* Appx3158. That practice minimized the potential interference between advertising traffic and other traffic by eliminating the need to make repeated requests for the same content. Appx144-145, Appx3158-3159.

For purposes of this appeal, claim 1 is representative of the other claims in the patent at issue, U.S. Patent No. 7,072,849. That claim recites "selectively storing advertising objects at a store established at the reception system." The district court

construed that to mean "pre-fetching advertising objects and storing at a store estab-lished at the reception system in anticipation of display concurrently with the appli-cations." Appx2108.

2.   IBM sued the Priceline Group Inc. (which later changed its name to Booking Holdings Inc.); Kayak Software Corp.; OpenTable, Inc.; and Priceline.com LLC, alleging that defendants' web applications and mobile applications had in-fringed numerous claims of the '849 patent under 35 U.S.C. § 271(a). Defendants' websites used HyperText Markup Language (HTML) to instruct users' web brows-ers how to process and display those webpages. Appx3378, Appx3677. Defendants' mobile applications executed defendants' computer code running on third-party mo-bile operating systems. Appx3172, Appx3396.

Defendants transmitted code containing explicit "cache control directives" that instructed a user's device to store locally the advertising images used on defend-ants' websites and mobile applications. Appx3210-3211, Appx3216-3217, Appx3379, Appx3385, Appx3536, Appx3567. As a result, when a user visited one of defendants' websites or used one of their mobile applications, the code from de-fendants' respective servers instructed the user's machine to store advertising con-tent locally, thereby performing the method claimed by the '849 patent without any further action by the user. Appx3380, Appx3387, Appx3392, Appx3438, Appx3454.

Before the district court, defendants moved for summary judgment, arguing that they had not infringed the '849 patent on the ground that a third party had performed the claimed "storing" step. Appx2383. IBM argued that defendants had in fact performed that step or, alternatively, that third-party performance of the step was attributable to them. Appx3114, Appx3117. The district court disagreed and granted the defendants' motion for summary judgment. Appx43.

3.   A divided panel of this Court affirmed in a non-precedential decision. Writing for the majority, Judge Lourie, joined by Judge O'Malley, reasoned that, "[w]hile there is an open question regarding who is actually performing the storing step," it could not be defendants; "some third party" is "involved in the performance of a method step, whether it is the user, or the device, or the browser's manufacturer," inasmuch as "the storing step occurs at the user's reception system." Majority Op. 8. The majority distinguished *SiRF Technology, Inc.* v. *International Trade Commission*, 601 F.3d 1319 (Fed. Cir. 2010), in which the Court held that an entity had engaged in direct infringement where its "devices and software dictate[d] the performance" of the steps of a method claim for improving GPS technology by sending GPS files from its servers to chips incorporated into "end-user, consumer GPS devices," with the result that two steps of the method claim occurred at the end user's device. See *id.* at 1323-1324, 1330-1331. The majority noted that in *SiRF*, unlike in this case, the claimed method step was performed by a chip in the user's device that had been manufactured by the defendant. *See* Majority Op. 8.

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The panel majority also rejected IBM's argument that defendants were liable for divided infringement—a form of direct infringement that occurs when multiple actors are involved in practicing the patent's steps and "the acts of one are attributable to the other such that a single entity is responsible for the infringement," such as when an "entity directs or controls others' performance." *Akamai Technologies, Inc.* v. *Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) (en banc). The majority determined that IBM had waived any attribution argument under a "benefit test" theory, which renders third-party performance of a claimed step attributable to an entity directed or controls that performance by "condition[ing] participation in an activity or receipt of a benefit upon performance of [that] step" and "establish[ing] the manner or timing of that performance." *Akamai*, 797 F.3d at 1023. The majority seemed to recognize that other theories of attribution may exist insofar as "principles of attribution are to be considered in the context of the particular facts presented," *id.* at 1023, but it did not consider any such theories on the ground that IBM had not sufficiently articulated one. *See* Majority Op. 11-12.

Judge Taranto dissented. While acknowledging the "factual distinction between this case and *SiRF*," he viewed that "difference in facts" as simply presenting "a new question to be decided" in light of the "general legal principles and relevant aspects of the reasoning of *SiRF*," which he deemed "highly significant of how the analysis of the present facts should be conducted." Dissent 2, 5. In *SiRF*, he observed, the Court was "careful" to "discuss performance of method steps in terms of

persons (including legal persons) rather than equipment," and to emphasize that "the inquiry must focus on the steps that are part of the claimed method," not actions that are outside the claim—however "essential" they may be to the "real-world operation" of the claim. *Id.* at 2-3 (citing *SiRF*, 601 F.3d 1329-1331). Based on those principles, Judge Taranto concluded that there was no basis for rejecting, as a matter of law, IBM's position that defendants were "storing the advertising on the end user's equipment" by way of the "giving of instructions that are automatically executed on that equipment without any further action by another person." *Id.* at 5.

REASONS FOR GRANTING REHEARING

In concluding that defendants could not have infringed the method claim at issue because some of the steps were performed on a remote device using third-party components in the possession of end users, the panel majority departed from a bedrock principle of patent law that underlies the decisions of both the Supreme Court and this Court: namely, that infringement turns on who, not what, bears responsibility for the infringing activity. The Court should grant rehearing to clarify that principle and to prevent future parties from avoiding infringement by deflecting blame to third-party hardware and software (or end users who merely possess those components).

A.   The Panel's Decision Depends On A Premise That Contravenes The Teachings Both Of The Supreme Court And This Court

The panel majority's determination that defendants could not possibly have infringed because the claimed storing step occurs at the user's local machine is flatly

inconsistent with the basic principle that infringement determinations turn on the persons responsible for causing the infringement, not on the equipment used to effect it. Rehearing is warranted to restore that principle and to correct the panel majority's erroneous determination.

1.   To begin with, the plain language of Section 271 makes clear that infringement hinges on who, not what, carries out the steps of a claim. Section 271 states that "*whoever* without authority makes, uses, offers to sell, or sells any patented invention" directly "infringes the patent." 35 U.S.C. § 271(a) (emphasis added); *see also* 35 U.S.C. § 271(b), (c).

The Supreme Court's decisions confirm that the focus of the infringement inquiry is on who performs the claimed method steps, not on what components are involved in effecting that performance. For example, in *Impression Products, Inc.* v. *Lexmark International, Inc.*, 137 S. Ct. 1523 (2017), the Court made clear that a patent gives a patentee an exclusive "right to prevent *others* from engaging in [certain] practices," and that, under Section 271(a), "[w]hoever engages" in those practices "'without authority' from the patentee may face liability for patent infringement." *Id.* at 1529, 1534 (emphases added). Likewise, in *Limelight Networks, Inc.* v. *Akamai Technologies, Inc.*, 572 U.S. 915 (2014), the Court held that a defendant cannot be liable for inducing infringement "when *no one* has directly infringed the patent," noting that direct infringement occurs when the steps of a method claim are

"all attributable to the same defendant either because the defendant actually per-

formed those steps or because he directed or controlled *others* who performed them."

Id. at 917, 921-922 (emphases added).

This Court, too, has repeatedly made clear that infringement turns on who

performs the method step. In *Akamai Technologies, Inc.* v. *Limelight Networks, Inc.*,

797 F.3d 1020 (2015), the Court held that, "[w]here more than one actor is involved

in practicing the steps," "a single entity directs or controls the acts of another" if the

entity "acts through an agent," "contracts with another" to perform a claimed step,

or "conditions" a third party's "participation in an activity or receipt of a benefit" on

performance of a step such that "the third party's actions are attributed to the alleged

infringer." *Id.* at 1022-1023. Similarly, this Court looked to who "dictate[d] the

performance" of the claimed steps in *SiRF Technologies, Inc.* v. *International Trade

Commission*, 601 F.3d 1319, 1331 (2010). As Judge Taranto noted in his dissent,

the Court in *SiRF* was careful to focus on who, not what, performed each claimed

method step, and to consider only actions that were part of the claimed method when

determining responsibility for their performance. *See* Dissent 2, 5-6; *SiRF*, 601 F.3d

at 1329-1331.

Numerous decisions of this Court confirm the principle that persons, not

things, engage in infringement. For example, the Court has deemed software us-

ers—not the software itself—infringers when they caused the software to perform a

claimed method step. *See Lucent Technologies, Inc.* v. *Gateway, Inc.*, 580 F.3d

1301, 1310-1311, 1317 (Fed. Cir. 2009). The Court has also recognized that individuals can infringe a claimed step of "causing a quantity of digital data" to be "transferred to a computer system" by using software products. *Symantec Corp.* v. *Computer Associates International, Inc.*, 522 F.3d 1279, 1293 (Fed. Cir. 2008). And the Court has determined that an entity could infringe when its mobile phones performed the step of "displaying" a menu provided by a third-party operating system. *Microsoft Corp.* v. *International Trade Commission*, 731 F.3d 1354, 1367 (Fed. Cir. 2013). And outside the context of computer technology, the Court has deemed individuals to have infringed the claimed step of "injecting a vaccine" by using "*in ovo* injection machines" to carry out that step. *Embrex, Inc.* v. *Service Engineering Corp.*, 216 F.3d 1343, 1346, 1349 (Fed. Cir. 2000) (per curiam).

All of these cases share a common thread: they turn on *who* caused infringement, rather than *what* component was used to carry it out. That approach comports with this Court's decisions holding that supplying a component on which a method step may be performed does not itself constitute performing that step. *See, e.g.*, *Ericsson, Inc.* v. *D-Link Systems, Inc.*, 773 F.3d 1201, 1221-1222 (Fed. Cir. 2014); *Ricoh Co.* v. *Quanta Computer Inc.*, 550 F.3d 1325, 1335 (Fed. Cir. 2008). And it accords with common sense: it is a doctor, not a scalpel, that operates on a patient; it is a person, not a phone, that calls a friend; and it is a carpenter, not a hammer, that builds a cabinet.

2.   The panel majority contravened the principle that infringement turns on who bears responsibility for the infringing activity.

It is undisputed that defendants "cause[d]" advertising objects to be stored locally on a user's machine. *See* Br. of Appellees 14. As Judge Taranto explained, defendants transmitted "to the end user's computer or mobile device" advertising data that "include[d] instructions," which were "automatically carried out on the end user's equipment to store the information at issue, without the end user's or any other person's intervention." Dissent 2; *see* Appx3392; Appx3380.

The panel majority nevertheless concluded that defendants could not be held liable for direct infringement merely because "the storing step occurs at the user's [device]" using third-party components. Majority Op. 8. But the fact of how and where the storing step occurs does not answer the question of who performs that step—the essential question when making an infringement determination. *See* pp. 7-9, *supra*. Indeed, the majority expressly left that question open and did not even entertain the possibility that defendants might be responsible for performing that step by means of using third-party components on the user's device. The majority only entertained the possibility that "the user" could have been responsible because the user was in the possession of the third-party components, not because they played any role in the claimed storing step. Majority Op. 8; *see also* Appx3392; Appx3380.

The panel's decision thus undermined the fundamental principle that infringement determinations should focus on who, not what, is responsible for infringement. For that reason, rehearing en banc is warranted.

B.   The Panel's Decision Is Incorrect

Proceeding from its erroneous premise, the panel majority went on to reach an erroneous result. This Court should grant rehearing en banc and reverse the panel's conclusion.

1.   Each defendant directly infringed IBM's method claim, either because it dictated the performance of the method claim on the end user's device or because third-party performance of a claimed step was attributable to it under a theory of divided infringement.

This Court made clear in *SiRF* that an entity is liable for performing a method step if it "dictates" the performance of that step on remote components. 601 F.3d at 1331. And in *Akamai*, the Court made clear that a method step performed by a third party can be attributed to an entity that directs or controls the third party's performance such that it can support a theory of divided infringement, and that such "principles of attribution are to be considered in the context of the particular facts presented." 797 F.3d at 1022-1223. Ultimately, both frameworks are focused on who actually caused the infringement and should thus bear responsibility for it.

Defendants plainly caused the infringement that occurred in this case. When a user visited one of their websites or uses one of their mobile applications, defendants' software code—the cache control directives—instructed third-party components on the user's machine to store advertising content locally, with the result the very method claimed by the '849 patent was performed. *See* p. 3, *supra*. That constitutes direct infringement: either defendants themselves performed the storing step by dictating that result on a user's device, or the performance of the storing step, at defendants' direction, by some third party—the user, the device's manufacturer, or the browser or mobile operating system's manufacturer—was attributable to them. But it could not have been neither.

2.   The panel majority erred in concluding otherwise. In rejecting the argument that defendants could be held liable for infringement by dictating that result remotely, the panel superficially distinguished the facts of this case from those of *SiRF*. Majority Op. 8. But as Judge Taranto noted in his dissent, the minor "difference in facts" should not have been deemed dispositive; instead, it merely indicated that this case presented "a new question to be decided" in light of the more general legal principles set forth in *SiRF*. Dissent 2, 5. The panel majority never seriously grappled with that new question. As Judge Taranto correctly concluded, the general principles of *SiRF* support the conclusion that defendants were "storing the adver-

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tising on the end user's equipment" by "giving [] instructions that [were] automatically executed on that equipment without any further action by another person." *Id.* at 5.

The panel majority further erred when it brushed aside IBM's argument that defendants could be held liable under an attribution theory of divided infringement on the ground that IBM had not sufficiently articulated a legal theory of attribution under *Akamai*. Majority Op. 11. In fact, IBM argued that this case presented a perfect example of one of the "factual scenarios" the Court in *Akamai* predicted would arise—namely, cache control directives causing the performance of the storing step—which would "warrant attributing others' performance of method steps to a single actor." 797 F.3d at 1023; *see* Br. of Appellant 44. That is a theory of direction and control distinct from the "benefit test" recognized in *Akamai*. *See* 797 F.3d at 1022-1023.

Indeed, the scenario presented here demonstrates "direction and control" much more clearly than the "benefit test." Where that test applies, the third party independently decides whether to perform the method step in order to obtain a benefit or participate in an activity. *See e.g. Eli Lilly & Co.* v. *Teva Parenteral Medicines, Inc.*, 845 F.3d 1357, 1365 (Fed. Cir. 2017); *Travel Sentry, Inc.* v. *Tropp*, 877 F.3d 1370, 1385 (Fed. Cir. 2017). But defendants engaged in a form of direction and control far stronger than that: the cache control directives caused the storing step to be performed *without any decision at all* on the part of the third party.

C.   The Question Presented Is Exceptionally Important, And The Panel's Decision Could Cause Significant Harm

If allowed to stand, the panel's decision would allow entities that cause a method step of another's patent to occur to avoid infringement liability simply because the step was carried out by underlying third-party hardware or software. The Court should grant rehearing en banc to prevent that irrational result.

Modern computer technology relies on numerous hardware and software components from multiple entities that work together to carry out computer instructions. For instance, applications that run on mobile phones, such as Uber, Netflix, and Spotify, are distributed by software developers who leverage underlying third-party hardware and software components to perform various functions. Mobile applications run on hardware designed by mobile phone companies, such as Apple and Samsung, using operating system code written by software companies, such as Apple and Google, which carry out instructions using processors manufactured by semiconductor companies, such as Qualcomm.

Mobile applications running on mobile phones are just the tip of the iceberg. It has long been common for entities to cause actions to be performed on computer systems—such as displaying hotel options (in the case of Priceline and Kayak), providing car services (in the case of Uber), or displaying a video (in the case of Netflix)—by instructing underlying third-party hardware and software components that are in the possession of end users. And as devices have become increasingly

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interconnected with the rise of cloud computing, the Internet of Things, and elec-

tronic personal assistants, that scenario is now ubiquitous. No modern computer

component runs in isolation.

In future cases, technology companies could readily rely on the panel's ra-

tionale to argue that they do not perform common method steps. For example, even

if a developer of a mobile application instructs the mobile phone to carry out a

claimed method step and that step automatically occurs without third-party interven-

tion, the developer could point to the panel majority's decision to argue that it does

not actually perform the step. It could focus on what components are involved—

rather than who is controlling them—to argue that it does not perform the step of

"displaying" because the video hardware obeys its commands to light up the screen,

or that it does not perform the step of "encrypting" because the processor implements

its instructions to manipulate the ones and zeros, or it does not perform the step of

"interfacing" because its instructions use low-level functions in the operating system

to communicate with the cell network. Alternatively, it could lay the blame on an

end user who has no role in the "displaying," "encrypting," or "interfacing" steps

merely because the end user possesses the phone on which the mobile application is

installed.

That should not be the law. The panel majority set a dangerous course by

allowing an entity that causes a method step to occur to avoid responsibility simply

by pointing to underlying hardware or software. Rehearing en banc should be granted to reconsider and reverse that erroneous conclusion.

CONCLUSION

The petition for rehearing en banc should be granted.

Respectfully submitted,

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JULY 22, 2019

ADDENDUM

NOTE: This disposition is nonprecedential.

United States Court of Appeals
for the Federal Circuit

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**INTERNATIONAL BUSINESS MACHINES
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Plaintiff-Appellant

v.

**BOOKING HOLDINGS INC., FKA PRICELINE
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Defendants-Appellees

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2018-1574

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Appeal from the United States District Court for the District of Delaware in No. 1:15-cv-00137-LPS, Chief Judge Leonard P. Stark.

———————————————

Decided: May 22, 2019

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KARIM ZEDDAM OUSSAYEF, Desmarais LLP, New York, NY, argued for plaintiff-appellant. Also represented by JOHN M. DESMARAIS, LAURIE STEMPLER.

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—————————

Before LOURIE, O'MALLEY, and TARANTO, *Circuit Judges.*

Opinion for the court filed by *Circuit Judge* LOURIE.

Dissenting opinion filed by *Circuit Judge* TARANTO.

LOURIE, *Circuit Judge.*

International Business Machines Corp. ("IBM") ap-
peals from the United States District Court for the District
of Delaware's grant of summary judgment that the as-
serted claims of U.S. Patent 7,072,849 ("the '849 patent")
were not infringed. *See Int'l Bus. Machs. Corp. v. The
Priceline Grp. Inc.*, 271 F. Supp. 3d 667, 683 (D. Del. 2017).
Because we conclude that the district court did not err, we
affirm.

BACKGROUND

IBM owns the '849 patent directed to a "method for pre-
senting advertising in an interactive service provided on a
computer network." '849 patent Abstract. According to
conventional methods, the advertising data interferes with
normal application traffic and competes for network com-
munication resources. *See id.* col. 2 ll. 26–30. The inven-
tors recognized the problem and sought to minimize the
potential interference between application and advertising
traffic. *See id.* col. 2 ll. 54–58. They achieved this by hav-
ing "the user reception system" include a "facility for stor-
ing and managing the advertising so that it can be pre-
fetched from the network and staged at the reception sys-
tem in anticipation of being called for presentation." *Id.*
col. 3 ll. 16–21. The technique of storing content locally to
eliminate the need to make repeated requests for the same
content is called caching. *See* Appellant's Br. 7.

IBM sued The Priceline Group Inc., which subsequently changed its name to Booking Holdings Inc., Kayak Software Corp., OpenTable, Inc., and priceline.com LLC (collectively "Booking Holdings"), alleging that Booking Holdings' web applications and mobile applications (Priceline, Kayak, and OpenTable) infringed claims 1, 4, 6, 8, and 12 of the '849 patent. *See* Appellee's Br. 3. It asserted that the accused websites are coded in HTML and use an HTTP "cache control" header that contains an explicit directive to store or cache the associated content, in violation of the claims of the patent. *See* Appellant's Br. 8–10. Also, it alleged that the accused mobile applications contain source code with the cache control directives. *See id.* at 11–12.

Representative claim 1 of the '849 patent reads as follows:

1. A method for presenting advertising obtained from a computer network, the network including a multiplicity of user reception systems at which respective users can request applications, from the network, that include interactive services, the respective reception systems including a monitor at which at least the visual portion of the applications can be presented as one or more screens of display, the method comprising the steps of:

a. structuring applications so that they may be presented, through the network, at a first portion of one or more screens of display; and

b. structuring advertising in a manner compatible to that of the applications so that it may be presented, through the network, at a second portion of one or more screens of display concurrently with applications, wherein structuring the advertising includes configuring the advertising as objects that include advertising data and;

> c. *selectively storing advertising objects at a store established at the reception system.*

Id. col. 39 ll. 43–61 (emphasis added). The district court construed the "selectively storing advertising objects at a store established at the reception system" (the "storing step") to mean "pre-fetching advertising objects and storing at a store established at the reception system in anticipation of display concurrently with the applications." *See Int'l Bus. Machs. Corp. v. The Priceline Grp. Inc.*, No. 1:15-cv-00137-LPS, 2016 WL 6405824, at *9 (D. Del. Oct. 28, 2016) ("*Claim Construction Order*").

Shortly thereafter, Booking Holdings moved for summary judgment of noninfringement, arguing that IBM would not be able to prove direct infringement because Booking Holdings does not perform the storing step. *See* J.A. 2395–97. Booking Holdings argued that the storing step was performed by the user's reception system, not Booking Holdings', and also could not be attributed to it under a divided infringement theory. *See Akamai Techs., Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) (en banc). IBM responded that Booking Holdings itself performed the storing step, despite the fact that the step occurs at the user's reception system, because, it asserts, Booking Holdings dictates performance of the storing step through its cache control directives. *See* Appellant's Br. 14. Alternatively, IBM argued that even if the storing step could not be considered to have been performed by Booking Holdings, the performance by the user's reception system should be attributable to Booking Holdings because it "directs or controls" the performance of the step. *See* J.A. 3117 (quoting *Akamai*, 797 F.3d at 1022). IBM contended that it need not argue "the participation or benefit test if [Booking Holdings] otherwise control[s] the reception system's performance." J.A. 3118 (citing *Akamai*, 797 F.3d at 1023).

The district court determined that IBM failed to present evidence that Booking Holdings "direct[s] or control[s] the web browsers' or mobile applications' performance of the storing step" and granted summary judgment of noninfringement. *See Int'l Bus. Machs. Corp.*, 271 F. Supp. 3d at 683. IBM sought reconsideration of the judgment of noninfringement for the mobile applications, arguing that the mobile applications always have caching enabled and must therefore carry out the cache control directives. The district court denied the motion, determining that IBM failed to produce evidence that Booking Holdings actually performed the storing step or directed or controlled the mobile operating systems' caching. *See Int'l Bus. Machs. Corp. v. The Priceline Grp. Inc.*, No. 1:15-cv-00137-LPS, 2018 WL 746521, at *2 (D. Del. Feb. 1, 2018).

IBM appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review procedural matters not unique to patent law under the law of the regional circuit. *See Solarex Corp. v. Arco Solar, Inc.*, 870 F.2d 642, 643 (Fed. Cir. 1989). We thus review a grant of summary judgment under the law of the Third Circuit. *See Braintree Labs., Inc. v. Novel Labs., Inc.*, 749 F.3d 1349, 1356 (Fed. Cir. 2014). The Third Circuit reviews *de novo* a district court's grant of summary judgment applying the same standards as the district court. *See Nicini v. Morra*, 212 F.3d 798, 805 (3d Cir. 2000) (en banc). Summary judgment is appropriate when "the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *see also Eisai, Inc. v. Sanofi Aventis U.S., LLC*, 821 F.3d 394, 402 (3d Cir. 2016).

I. CLAIM CONSTRUCTION

IBM argues that the district erred in construing "selectively *storing advertising objects* at a store established *at*

the reception system" to mean "pre-fetching advertising objects and *storing* at a store established *at the reception system* in anticipation of display concurrently with the applications." *See Claim Construction Order*, 2016 WL 6405824, at *9 (emphases added). IBM contends that the proper construction should be "*storing advertising objects* according to a predetermined storage criterion at a store established *at the reception system*," Appellant's Br. 54 (emphases added), omitting reference to "pre-fetching."

Claim construction is ultimately a question of law that we review *de novo*. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). Any subsidiary factual findings based on extrinsic evidence "must be reviewed for clear error on appeal." *Id.* But "when the district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent's prosecution history), the judge's determination will amount solely to a determination of law," which we review *de novo*. *Id.*

However, we need not decide whether the district court correctly construed the storing step because both the district court's construction and IBM's proposed construction require "storing" advertising objects "at the reception system." *Compare Claim Construction Order*, 2016 WL 6405824, at *9 (construing the term to mean "pre-fetching advertising objects and *storing [advertising objects]* at a store established *at the reception system* in anticipation of display concurrently with the applications"), *with* Appellant's Br. 54 (arguing for a proposed construction of "*storing advertising objects* according to a predetermined storage criterion at a store established *at the reception system*"). Because, as we determine below, the infringement analysis turns on the entity performing the storing of the advertising objects at the reception system, and both the district court's construction and IBM's proposed construction include that same requirement, the infringement analysis must focus on storing and is the same under either construction. We therefore need not determine whether

the district court's claim construction was correct. The prefetching language of the court's construction does not impact the outcome here.

II. INFRINGEMENT

IBM argues that it has presented substantial evidence that Booking Holdings directly infringes the asserted claims because Booking Holdings itself performs the storing step. Alternatively, it argues that even if Booking Holdings does not perform the storing step, it is still liable for direct infringement under divided infringement theories. *See Akamai*, 797 F.3d at 1022. We take each argument in turn.

Infringement is a question of fact. *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed. Cir. 2006). Under 35 U.S.C. § 271(a), "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." Direct infringement requires that all the steps of a claimed method be "performed by or attributable to a single entity." *See Akamai*, 797 F.3d at 1022 (citing *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379–81 (Fed. Cir. 2007)).

IBM argues that the district court erred in granting summary judgment of noninfringement by assuming that this is a divided infringement case. However, IBM contends that Booking Holdings "[itself] perform[s] the storing step by dictating caching at the user's device" via the cache control directives. Appellant's Br. 22. According to IBM, this situation is similar to that in *SiRF Technology, Inc. v. International Trade Commission*, 601 F.3d 1319 (Fed. Cir. 2010), which it argues held that when an accused infringer dictates the performance of a claimed method step, that is sufficient to hold the accused infringer responsible for performing that step.

Booking Holdings responds that it is undisputed that it does not perform the storing step and that the users' third-party web browsers and mobile operating systems perform the local storing of advertising data at the users' systems. In fact, Booking Holdings argues that it is not involved in the actual storing of the data at all. According to Booking Holdings, the storing step is performed when the users' browsers or mobile devices cache the advertising data, and the district court properly granted summary judgment of noninfringement.

We agree with Booking Holdings that the district court properly granted summary judgment of noninfringement. There is no dispute that the storing step occurs on the users' device. *See* Appellant's Br. 8–12; Appellee's Br. 6–7. The only question is whether, by setting the cache control directives, Booking Holdings should be held liable as if it had performed the storing step itself. IBM relies on *SiRF* to argue in the affirmative. In *SiRF*, the defendant manufactured a chip incorporated in the end user's device that performed all the claimed method steps. *Id.* at 1330–31. We specifically determined, first, that this was "*not* a situation . . . in which a third party actually performs some of the designated steps . . . ." *Id.* at 1329 (emphasis added). After the user put the system into operation, the user was no longer involved in the performance of the method steps. *Id.* at 1330–31. Only then did we determine that the defendant in *SiRF* itself directly infringed. *Id.*

In contrast, neither party disputes that in this case, the storing step occurs at the user's reception system. *See* Appellant's Br. 8–12; Appellee's Br. 6–7. Therefore, this case is distinguishable from *SiRF* because some third party (at least a party that is not Booking Holdings) *is* involved in the performance of a method step. While there is an open question regarding who is actually performing the storing step, *see* Oral Arg. at 11:38–12:55, 14:35–16:03, *Int'l Bus. Machs. Corp. v. Booking Holdings Inc.*, No. 18-1574 (Fed. Cir. Apr. 5, 2019), http://oralarguments.cafc.uscourts.gov/

default.aspx?fl=2018-1574.mp3, whether it is the user, or the device, or the browser's manufacturer, the answer does not matter for our purposes. What matters in this case is that Booking Holdings is *not* performing the storing step.

IBM also argues that the focus should not be on the entity performing the method step, but on the entity that is dictating its performance. *See id.* at 5:54–6:35; Appellant's Br. 23–25; Reply Br. 4. We have addressed such situations under the divided infringement theories in *Akamai*. 797 F.3d at 1022–24.

Divided infringement occurs when "more than one actor is involved in practicing the steps" and "the acts of one are attributable to the other such that a single entity is responsible for the infringement." *Id.* at 1022. This can arise "(1) where that entity directs or controls others' performance, and (2) where the actors form a joint enterprise." *Id.* IBM does not argue that Booking Holdings is part of a joint enterprise with its users; we therefore focus only on the first situation where an entity "directs or controls others' performance." *Id.* "Whether a single actor directed or controlled the acts of one or more third parties is a question of fact . . . ." *Id.* at 1023.

We have articulated two general principles to determine if a single entity directs or controls the acts of another. First, "an actor is liable for infringement . . . if it acts through an agent (applying traditional agency principles) or contracts with another to perform one or more steps of a claimed method" (the "agency test"). *Id.* Second, "liability under § 271(a) can also be found when an alleged infringer conditions participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establishes the manner and timing of that performance" (the "benefit test"). *Id.* On appeal, IBM does not argue that Booking Holdings has an agency or contractual relationship with its users. *See* Reply Br. 7 ("IBM

does not contend that Defendants direct or control the storing step by acting through an agent or contracting with another."). We thus only review IBM's benefit test argument.

IBM argues that users of Booking Holdings' products receive a benefit from caching because the users can "retrieve content from their local device more quickly than from [Booking Holdings'] network." Appellant's Br. 42. Accordingly, IBM contends that Booking Holdings infringes under a theory of attribution because it conditions the benefits from caching on executing the cache control directives. IBM also argues that this court's decision in *Travel Sentry, Inc. v. Tropp*, 877 F.3d 1370 (Fed. Cir. 2017), held that infringement could be found if an actor "'profit[s] from direct infringement' . . . [and] has the right and ability to stop or limit the infringement." *Id.* at 1385 (quoting *Akamai*, 797 F.3d at 1023). According to IBM, Booking Holdings profits from caching because caching improves network efficiency by reducing requests for advertising data over the network, and it has the right and ability to stop caching from occurring.

Booking Holdings responds that IBM has waived this argument by not presenting it before the district court. In fact, Booking Holdings argues that, not only did IBM not raise this argument, but it affirmatively stated in its summary judgment motion that it "need not" make arguments that Booking Holdings "meet[s] the participation or benefit test" because Booking Holdings "control[s] the reception system's performance." J.A. 3118 (citing *Akamai*, 797 F.3d at 1023). Booking Holdings further contends that even though IBM brought *Travel Sentry* to the attention of the district court, it did not argue how that case supported its position.

We agree with Booking Holdings that IBM waived this argument. It affirmatively stated it was *not* arguing divided infringement under the benefit test. *See id.* ("Defendants need not meet the participation or benefit test if

they otherwise control the reception system's performance."). While IBM did raise the issue of divided infringement, and it argues that waiver generally does not apply to specific arguments, *see Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1338 n.11 (Fed. Cir. 2005) (citing *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1346 (Fed. Cir. 2001)), that general rule does not address the current situation. Here, IBM expressly forfeited a particular argument. *See* J.A. 3118. IBM also relies on the fact that it cited *Travel Sentry* to the district court and that it properly preserved the issue in that manner. *See* Reply Br. 13. We do not agree. IBM cited a case to support an argument that it had already abandoned. Because IBM chose not to argue divided infringement under the benefit test before the district court, we will not consider it for the first time on appeal. *See Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1426 (Fed. Cir. 1997) ("With a few notable exceptions, . . . appellate courts do not consider a party's new theories, lodged first on appeal.").

Lastly, IBM argues generally that the district court erred by failing to evaluate attribution under "current law," Appellant's Br. 45, and that the "principles of attribution are to be considered in the context of the particular facts presented," *Akamai*, 797 F.3d at 1023. However, it is unclear what other legal theory IBM is asserting under which the district court erred by not considering the "particular facts" of its case. *Id.* Moreover, while *Akamai* left open the possibility of "other factual scenarios" that "may arise which warrant attributing others' performance of method steps to a single actor," those factual scenarios must align with a particular "legal framework for direct infringement." *Id.* (listing as possible legal frameworks theories from agency law, contract law, and the doctrine of joint enterprise, from which one could hold an entity liable for another's action(s)). IBM has not identified a legal theory that the district court failed to apply to its particular

facts. Accordingly, the district court properly granted summary judgment of noninfringement.

CONCLUSION

We have considered IBM's remaining arguments but find them unpersuasive. For the foregoing reasons, we *affirm* the district court's judgment of noninfringement.

AFFIRMED

NOTE: This disposition is nonprecedential.

United States Court of Appeals
for the Federal Circuit

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**INTERNATIONAL BUSINESS MACHINES
CORPORATION,**
Plaintiff-Appellant

v.

**BOOKING HOLDINGS INC., FKA PRICELINE
GROUP INC., KAYAK SOFTWARE CORPORATION,
OPENTABLE, INC., PRICELINE.COM LLC,**
Defendants-Appellees

_____

2018-1574

_____

Appeal from the United States District Court for the District of Delaware in No. 1:15-cv-00137-LPS, Chief Judge Leonard P. Stark.

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TARANTO, *Circuit Judge*, dissenting.

I respectfully dissent from the court's holding that, as a matter of law, Booking Holdings does not perform the "storing" step of the claimed methods. IBM has presented evidence that the following process regularly occurs when an end user visits one of the Booking Holdings websites or uses one of the Booking Holdings mobile applications: Booking Holdings sends advertising information to the end user's computer or mobile device and includes instructions

in the transmission that are automatically carried out on the end user's equipment to store the information at issue, without the end user's or any other person's intervention. I would conclude that IBM has presented sufficient evidence to create a triable issue of fact as to whether Booking Holdings, through the instructions it gives that are automatically carried out on the receiving devices, performs the "storing" step of the claims at issue. On that basis, I would reverse the district court's grant of summary judgment of non-infringement.

As the panel majority observes, our decision in *SiRF Technology, Inc. v. International Trade Commission*, 601 F.3d 1319 (Fed. Cir. 2010), involved different facts from those present here. But our system of precedent pervasively involves reliance on the rationales of earlier decisions to resolve later cases involving different facts. Here, *SiRF* is highly significant for how the analysis of the present facts should be conducted.

First, we were careful in *SiRF* to discuss performance of method steps in terms of persons (including legal persons) rather than equipment. *See id.* at 1329–31 (discussing alleged infringer, its customers, and end users, rather than their respective devices, as potentially performing method steps). Indeed, the statutory provision defining acts of patent infringement makes clear that only persons, not equipment, can infringe a patent. *See* 35 U.S.C. § 271(a) ("*[W]hoever* without authority makes, uses, offers to sell, or sells any patented invention . . . infringes the patent." (emphasis added)); *see also* 1 U.S.C. § 1 (defining "whoever" to include corporations, companies, and certain other entities). That focus on persons, not equipment, necessarily applies to determining *who* (not what equipment) carries out the steps of a method claim under the longstanding interpretation of section 271 that for a method claim to be infringed, each step must be performed by, or be properly attributed to, the direct infringer. *See Limelight Networks, Inc. v. Akamai Techs., Inc.*, 572 U.S.

915, 921–22 (2014); *Travel Sentry, Inc. v. Tropp*, 877 F.3d 1370, 1378 (Fed. Cir. 2017); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328–29 (Fed. Cir. 2008).

Second, we emphasized in *SiRF* that the inquiry must focus on the steps that are part of the claimed method, not actions that might well be essential to a fully functioning, real-world operation but that are outside the claim. For instance, the asserted claims in *SiRF* included steps of "communicat[ing] the satellite ephemeris to a mobile GPS receiver" and "transmitting the formatted data to a remote receiver." *SiRF*, 601 F.3d at 1329–30. The alleged infringer argued that it did not perform those steps because, "in order for the data to be 'communicat[ed]' or 'transmit[ted]' to the GPS receiver," the alleged infringer's "customers must forward this data to the mobile GPS receivers, and the end users of the GPS devices must download the data from the customers' servers." *Id.* at 1330. We rejected that argument. We explained that "the actions of 'forwarding' or 'downloading' are not required by the claims, and, therefore, the fact that other parties perform these actions does not preclude a finding of direct infringement." *Id.*

Related to *SiRF* is the district court decision in *TQP Development, LLC v. Intuit Inc.*, No. 12-cv-180, 2014 WL 2809841 (E.D. Tex. June 20, 2014) (Bryson, J.), which is written in terms of direction and control under the standards for divided infringement, but is instructive on the more general question of who performs steps of a patented method.[1] The claimed method included two steps at a

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[1]   In my view, IBM's argument—based on Booking Holdings' sending of instructions that are automatically implemented on the end user's equipment without further action by the end user or any other person—gives IBM a triable case on whether Booking Holdings performs the "storing" step. But if one follows Booking Holdings and blurs the person/equipment distinction, then it seems to me

transmitter (generating a first sequence of pseudo-random key values and encrypting data) and two steps at a receiver (generating a second sequence of pseudo-random key values and decrypting the data). *See id.* at *11. There was no dispute that the defendants (at their servers) performed the steps that occur at the transmitter. *Id.* The defendants sought summary judgment of non-infringement, however, on the ground that the steps that occur at the receiver (indisputably located on end users' computers, not the defendants' own servers) were not attributable to the defendants. The court denied summary judgment, holding that there was a triable factual issue as to whether the steps at the receiver were controlled by the defendants, whose websites used an encryption algorithm covered by the claims. *Id.* at *11–12. The court relied on evidence from the plaintiff that the end users' computers would, without end users' intervention, automatically perform the receiver-end steps once the server transmissions were made and received. *Id.* at *12. The court explained that the fact that users must take various actions *before* the claimed steps could occur, such as choosing whether to visit the defendants' websites and whether to configure their browsers to use the relevant encryption algorithm, did not foreclose a finding of direct infringement by the defendants. *Id.* Such users' actions are merely "prefatory to the steps recited in the claim" and "only establish the setting within which infringement may occur." *Id.*

Turning back to *SiRF*, I note my agreement with the panel majority here that, of course, the facts of the present case differ from those of *SiRF*. In *SiRF*, once the customers

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that the substance of IBM's argument justifies a finding of actionable divided infringement, whether under the "direction or control" rubric or otherwise. I agree with the panel majority that IBM did not preserve its "conditioning receipt of a benefit" argument for divided infringement.

and end users took the necessary preparatory actions, only the accused infringer's hardware and software were involved in performing the claimed steps. *See* 601 F.3d at 1331 ("Once the GPS receiver is enabled and ready to process the data, only [the accused infringer's] actions are involved in 'processing' or 'representing' the data."). Here, by contrast, hardware and software created by entities other than Booking Holdings, such as web browsers and mobile operating systems, are involved in storing the advertisements sent by Booking Holdings' servers (or a third-party content delivery network). For example, Booking Holdings' mobile applications call underlying code provided by Apple or Google to make HTTP requests for web content, and that underlying code is executed when the Booking Holdings instruction to cache is received.

The existence of a factual distinction between this case and *SiRF*, however, does not establish that the result here must be different from the result reached in *SiRF*. The difference in facts just means that there is a new question to be decided—one not presented or decided in *SiRF*, but to be decided in light of both general legal principles and relevant aspects of the reasoning of *SiRF*. On that question, I do not see a basis for rejecting, as a matter of law, IBM's position that Booking Holdings is storing the advertising on the end user's equipment through its giving of instructions that are automatically executed on that equipment without any further action by another person.

The panel majority notes that "the storing step occurs at the user's reception system." Majority at 8. But that was true in *SiRF* as well: it was undisputed that "the 'processing' and 'representing' steps must take place in the mobile GPS device," which was not in the possession or control of the accused infringer. *See* 601 F.3d at 1330. The court squarely held that fact not to preclude a finding that the accused infringer performed the steps at issue. And as *SiRF* illustrates, the who-stores question does not ask what equipment is involved but what persons are taking

what action, and only the actions that are part of the specific claim steps, not actions outside those claim steps, determine the answer.

At oral argument, Booking Holdings suggested that the suppliers of the operating systems or browsers on the end users' devices are persons that carry out the storing (as a matter of law). The panel majority does not adopt that contention. We have held that supplying a piece of software does *not* mean that the supplier is performing the steps involved in executing the software. *See Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1221–22 (Fed. Cir. 2014); *Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1335 (Fed. Cir. 2008). What the software suppliers do has already been done before the steps of the claimed methods here begin.

The specific patent at issue does not furnish a legally compelled answer to the who-stores question. The district court construed the phrase "selectively storing" in claim 1 of the '849 patent to clarify the meaning of "selectively," but it did not separately construe "storing" as used in any of the claims at issue. The parties did not request such a construction. In these circumstances, "storing" must be given its ordinary meaning, and the issue of who performs the "storing" step is a factual question.

In my view, IBM has presented enough evidence, including expert testimony, to permit a reasonable jury to find that Booking Holdings performs the "storing" step. Booking Holdings has not identified a settled common usage that forbids IBM's position as to "storing." And both *SiRF*'s and *TQP*'s reasoning provide considerable support for the facial reasonableness of IBM's position. In response to user requests through web browsers or mobile applications, Booking Holdings sends advertisements that, according to IBM's evidence, are automatically stored on user devices in accordance with cache control parameters programmed by Booking Holdings. I accept the premises that

storage of advertisements does not occur until (1) the web-browser or mobile-operating-system provider has written and supplied to the end user software that carries out caching when a command to do so is received; (2) the user has enabled (or refrained from disabling) caching on the device; and (3) the user accesses Booking Holdings' website or mobile application. But those premises do not foreclose a finding that Booking Holdings performs the "storing" step by giving the command to cache. Those third-party actions are not part of the claimed methods but rather "prefatory" steps that "establish the setting within which infringement may occur." *See TQP*, 2014 WL 2809841, at *12.

For those reasons, I respectfully dissent from the holding that Booking Holdings does not perform the "storing" step as a matter of law. I would reverse the grant of summary judgment, which rests on the "storing" ground. Booking Holdings argues for affirmance on the alternative grounds that there is no triable issue as to its "selectively" storing, under the district court's claim construction of "selectively storing" in claim 1, and also no triable issue as to its meeting the "predetermined amount" requirement of claim 8. I would reject those arguments. IBM has pointed to evidence that could reasonably be found to establish satisfaction of those claim limitations, even under the adopted construction.

I do not address the correctness of the "selectively storing" construction. That construction played no role in the district court's grant of summary judgment. And, as just noted, it need not be addressed to reverse the grant of summary judgment.

CERTIFICATE OF SERVICE

I, Karim Z. Oussayef, counsel for appellant and a member of the Bar of this Court, certify that, on July 22, 2019, I served a complete copy of the foregoing on all counsel of record by filing it with the United States Court of Appeals for the Federal Circuit using the CM/ECF system.

I further certify that all parties required to be served have been served.

/s/ Karim Z. Oussayef
KARIM Z. OUSSAYEF

CERTIFICATE OF COMPLIANCE
WITH TYPEFACE AND WORD-COUNT LIMITATIONS

The undersigned certifies that this brief complies with the type-volume limitation set forth in Fed. R. App. P. 35(b)(2) and Fed. Cir. R. 35(c)(2). Excluding exempt portions, this brief contains:

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/s/ Karim Z. Oussayef
KARIM Z. OUSSAYEF

JULY 22, 2019