2019-126

United States Court of Appeals for the Federal Circuit

In re: GOOGLE LLC,

Petitioner.

On Petition for Writ of Mandamus to the United States District Court for the Eastern District of Texas in Case Nos. 2:18-cv-00462, -00463 (consolidated), Hon. Rodney Gilstrap

RESPONDENT SUPER INTERCONNECT TECHNOLOGIES LLC'S RESPONSE TO PETITION FOR WRIT OF MANDAMUS

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Dated: October 2, 2019

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

In re: Google LLC

Case No. 2019-126

CERTIFICATE OF INTEREST

Counsel for the:
☐ (petitioner) ☐ (appellant) ☒ (respondent) ☐ (appellee) ☐ (amicus) ☐ (name of party)

Super Interconnect Technologies LLC

certifies the following (use "None" if applicable; use extra sheets if necessary):

1. Full Name of Party Represented by me	2. Name of Real Party in interest (Please only include any real party in interest NOT identified in Question 3) represented by me is:	3. Parent corporations and publicly held Companies that own 10 % or more of stock in the party
Super Interconnect Technologies LLC	Super Interconnect Technologies LLC	Acacia Research Group LLC
		Acacia Research Corporation

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (**and who have not or will not enter an appearance in this case**) are:

Wesley Hill and Andrea Leigh Fair of Ward, Smith & Hill, PLLC
Brian Herrmann (no longer with Bragalone Conroy PC)

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. See Fed. Cir. R. 47. 4(a)(5) and 47.5(b).

Super Interconnect Technologies LLC v. Google LLC, Nos. 2:18-cv-00462, -00463 (E.D. Tex.)

October 2, 2019
Date

/s/ Jeffrey R. Bragalone
Signature of counsel

Please Note: All questions must be answered

Jeffrey R. Bragalone
Printed name of counsel

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RESTATEMENT OF THE QUESTIONS PRESENTED

1. Approximately one year ago, this Court refused to grant mandamus relief to Google based on identical facts. Since then, no other district court has addressed the same fact pattern, and Google concedes that the "edge nodes" on which the district court predicated its venue determination no longer exist. Given its high bar to show that the district court's ruling implicates "special circumstances justifying mandamus review of certain basic, unsettled, recurring legal issues over which there is considerable litigation producing disparate results," has Google demonstrated a compelling reason why this Court should now reverse course and reach an opposite conclusion on the same facts?

2. Google's business is serving data. The district court found that the established location of Google's data servers in the district, under the terms of specific contracts, constitutes "a regular and established place of business" under 28 U.S.C. § 1400(b). Has Google demonstrated that the district court's determination is *clear and indisputable* error?

INTRODUCTION

Nothing has changed that would warrant a departure from the Court's prior decision in *In re Google*, No. 18-152, 2018 WL 5536478 (Fed. Cir. Oct. 29, 2018) (unpublished), *rehearing denied*, 914 F.3d 1377 (Fed. Cir. 2019).

That well-reasoned decision, issued less than a year ago, denied a nearly

identical petition for writ of mandamus from Google. In that petition, Google requested that the Court direct Judge Gilstrap of the United States District Court for the Eastern District of Texas to dismiss or transfer the case for improper venue because, *inter alia*, Google contended that its servers located in the district could not possibly be regular and established places of business under § 1400(b) as clarified by the Court's prior decision in *In re Cray*, 871 F.3d 1355 (Fed. Cir. 2017).

In denying Google's prior petition, the Court found no almost-even disagreement among a large number of district courts concerning the issue, and held that the district court's decision did not clearly involve a broad and fundamental legal question relevant to § 1400(b). *See* 2018 WL 5536478, at *2-3.

Mandamus is no more appropriate in this case. The district court's analysis is the same as it was in *Google*. There is no broad and fundamental legal question relevant to § 1400(b) that would be suitable for mandamus. Indeed, the district court expressly ruled that it did not endorse a broad rule that "venue is proper in any judicial district where a defendant owns, controls, or otherwise has a connection to a piece of property, real or personal, related to the defendant's business." Appx3.

Contrary to the claims of Google and the *amici*, the sky has not fallen as a result of *Google*. Almost a year has passed since *Google*, yet there is still a paucity of district court decisions addressing the issue. No court has adopted a general rule that a defendant's "equipment" constitutes a "regular and established place of

business" under § 1400(b). Despite the large number of cases filed against Google nationwide, Google fails to identify any decision (other than *SEVEN* and the one below) where a district court has concluded that Google is subject to venue in a district as a result of its servers and contracts with ISPs. Nor do Google and the *amici* identify any other decisions involving comparable facts.

Only one fact has changed since the prior petition: Google admits that it removed the servers at issue from the district. Thus, there is now even less likelihood that the same issue will arise in the future. For the same reasons it previously denied the petition in *Google*, the Court should deny the instant petition.

In addition, Google fails to demonstrate that the district court made a clear and indisputable error in determining that Google's servers and their location in the district, under certain contracts with ISPs, constitute regular and established places of business of Google under § 1400(b). The district court's decision has a substantial basis in both the statutory language and the Court's prior decision in *Cray*. Advances in the law are always chasing advances in technology, but here the district court properly applied existing law to the unique nature of Google's business, which relies on servers located in the district to store and deliver content to its users.

Google fails to show any clear conflict between the district court's decision and the language of § 1400(b) or the Court's decision in *Cray*. Instead, Google attempts to rewrite the statute to impose additional requirements not found in the

statutory text. This improper exercise cannot create *clear and indisputable* error by the district court, and further warrants denial of the extraordinary writ.

UNDISPUTED FACTS SUPPORTING THE ORDER BELOW

The underlying facts are undisputed, and are identical to the facts at issue in *SEVEN Networks, LLC v. Google LLC*, 315 F. Supp. 3d 933 (E.D. Tex. 2018). *See* Appx2 ("Google acknowledges that this Court previously found venue under identical facts in *SEVEN* …. Google does not dispute any of these underlying facts, but instead urges the same legal arguments that this Court denied in *SEVEN*."). Super Interconnect summarizes these undisputed facts below.

A. Google's Business

Google is in the business of storing, organizing, and distributing data. *SEVEN*, 315 F. Supp. 3d at 947. Google's vision is "to provide access to the world's information in one click," and its mission is "to organize the world's information and make it universally accessible and useful." *Id.* Making information available to users as quickly as possible is critical to Google's business. *Id.*

B. Google's Edge Network

To achieve its business goal of making information accessible to everyone as quickly as possible, Google developed a content-delivery network that it calls the Edge Network. *Id.* Google's Edge Network has three elements: Core Data Centers, Edge Points of Presence, and Edge Nodes. *Id.* at 948. The Core Data Centers are

used for computation and backend storage. *Id.* Edge Points of Presence are the middle tier of the Edge Network and connect Core Data Centers to the internet. *Id.* Edge Nodes are the layer of the network closest to users. *Id.*

Popular content, including YouTube videos, video advertising, music, mobile apps, and other digital content from the Google Play store, is cached on the Edge Nodes, which Google refers to as the Google Global Cache ("GGC"). *Id.* Storing content locally at the Edge Nodes lowers delivery costs for Google, network operators, and ISPs. *Id.* Storing content locally also allows the content to be delivered more quickly, which improves its users' experience. *Id.*

C. Google's GGC Servers

GGC servers provide content to users with Google's proprietary "uStreamer" software that Google installs on the Edge Nodes. *Id.* at 948-49. uStreamer is largely autonomous, in the sense that almost all decisions related to serving a particular content request are made locally, without coordinating with other servers. *Id.* at 949. uStreamer allows Google's GGC servers independently to determine what content to cache, based on local requests. *Id.* at 948. When a GGC server receives a content request, if the content is stored in the node's local cache, the node serves it to the end user. *Id.* at 949. If the requested content is not already stored on the node, and the content is cache-eligible, the node will retrieve it from Google, serve it to the user, and store it in the local cache for future requests. *Id.*

D. Google's ISP Agreements

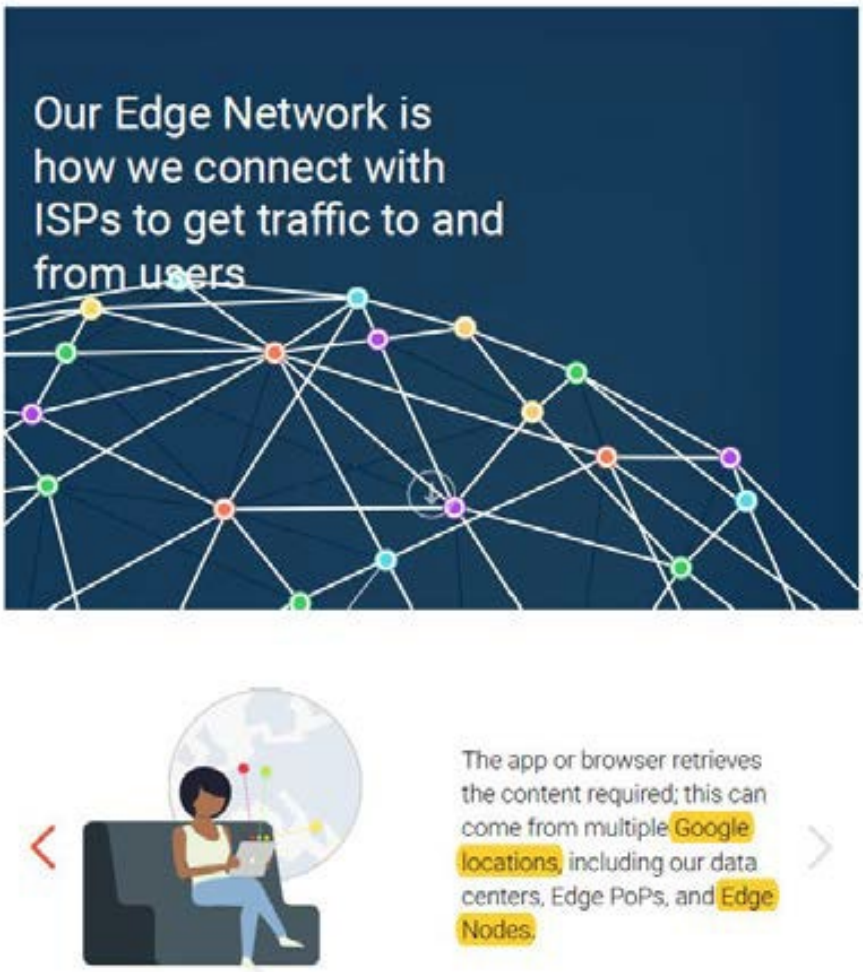
Google's Edge Nodes are located in spaces provided to Google by local ISPs. *Id.* at 949. ISPs whose networks have substantial traffic to Google and are interested in saving bandwidth may enter into Global Cache Service Agreements with Google. *Id.* Under the Global Cache Service Agreements:

- Google provides: GGC servers and software that are to be housed in the host's facilities (in spaces specifically set aside for Google); technical support; service management of the hardware and software; and content distribution services, including content caching and video streaming. *Id.*
- The ISPs provide, among other things: rack space in a physical building where Google's computer hardware is mounted; power, network interfaces, and IP addresses; remote assistance and installation services; and network access between Google's equipment and the ISP's network subscribers. *Id.*
- Google owns the GGC servers and the software operating on them. *Id.*
- The ISPs may not remove, or even simply move, an installed GGC server without Google's permission. *Id.* at 952.
- The ISPs may not access, use, or dispose of Google's hardware or software without Google's permission. *Id.* at 953.

- Without specific, step-by-step instruction from Google, the ISPs may not even turn the power to a GGC server on or off or tighten a server's screws or cable ties. *Id.*

The Google Cache Service Agreements with local ISPs allow Google to maintain its GGC servers in physical locations close to users, which brings down Google's delivery costs, improves performance, and increases user satisfaction. *Id.* at 948. Hosting Google's GGC servers brings down delivery costs for the ISPs. *Id.*

Google publicly describes its Edge Nodes and their GGC servers, which are hosted by the ISPs, as "Google locations." *Id.* at 965-66.



SAppx13.

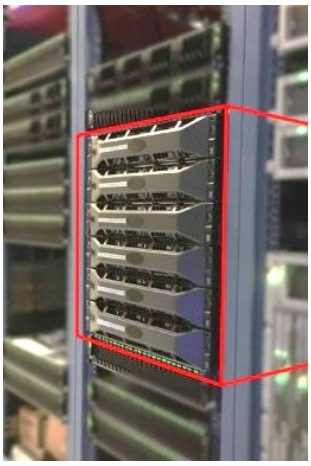
E. Google's Business in the Eastern District of Texas

Multiple ISPs have hosted GGC servers in the Eastern District of Texas.[1] For example, Suddenlink Communications is an ISP that hosted six GGC servers in Tyler, Texas, in the building shown below. *SEVEN*, 315 F. Supp. 3d at 949-50.

[1] Shortly before Google filed its Petition for Writ of Mandamus, "Google took its GGC servers in the District out of service, so they are no longer serving traffic or cached content." Petition at 6.

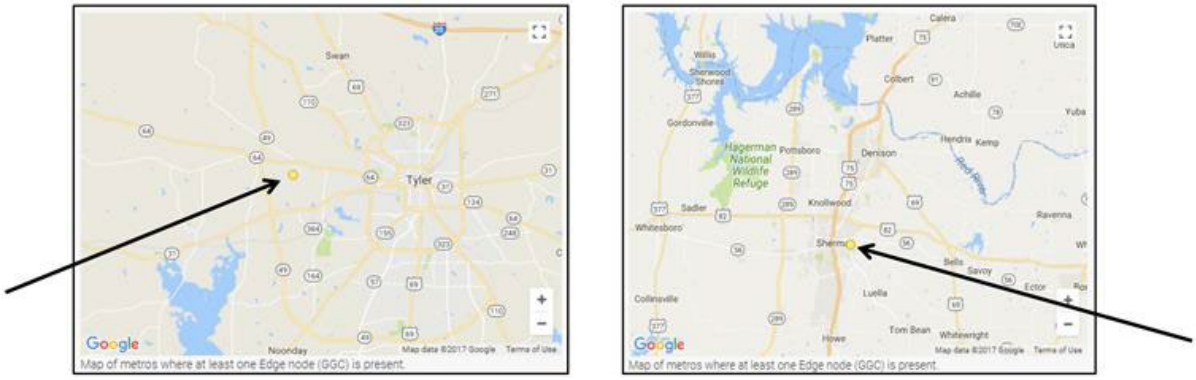
Exterior

Interior Rack Spaces



Google GGC Servers

Similarly, CableOne is an ISP that hosted three GGC servers in Sherman, Texas, and three GGC servers in Texarkana, Texas.[2] *Id.* at 949. Google's website presented a map of metro areas where at least one GGC server is present and that map identified the GGC servers in Tyler and Sherman.



Id. at 966 n.51; SAppx14.

Google's GGC servers located in the district cached content that included, among other things, (i) video advertising, (ii) apps, and (iii) digital content from the

[2] Tyler, Sherman, and Texarkana are located in the Eastern District of Texas.

Google Play store. *SEVEN*, 315 F. Supp. 3d at 950. Google's GGC servers located in the Eastern District of Texas delivered this cached content to users in the district. *Id*. Google generates revenue, among other things, (i) by delivering video advertising, (ii) from apps, and (iii) from digital content in the Google Play store. *Id.*

F. The District Court's Ruling

Because Google did not dispute any of the underlying facts and urged the same legal arguments that it did in *SEVEN*, the district court determined that venue was proper in this case for the reasons outlined in *SEVEN*. Appx2. Addressing the concerns raised by Judge Reyna's dissent in *Google*, the court also emphasized that its decision was based on the particular facts of the case and that it did not intend to create a general rule that venue is proper in any district where a defendant owns, controls, or otherwise has property. Appx2-4. As the Court previously ruled in *Google*, there is no basis for mandamus of the district court's decision.

ARGUMENT

A. Google Can Obtain Adequate Relief on Appeal.

"A writ of mandamus is a drastic remedy available only in extraordinary circumstances" and may issue only if the petitioner has no other adequate means of relief. *In re HTC Corp.*, 889 F.3d 1349, 1352 (Fed. Cir. 2018). The only reason Google contends appeal would be inadequate is that "the relief it seeks—being spared the burden of having to litigate dozens of cases in an inconvenient forum that

is improper under federal law—cannot be secured on appeal." Petition at 23-24. But that is not enough. *See HTC*, 889 F.3d at 1354 ("Petitioner's only argument is that it should be able to avoid the inconvenience of litigation by having this issue decided at the outset of its case. This is insufficient, and there is no other indication that Petitioner cannot be afforded adequate relief on appeal.").

Indeed, the Court recently rejected Google's attempt to obtain mandamus relief in identical circumstances in *Google* because absent exceptional circumstances — which did not exist then and do not exist now — mandamus cannot be used to obtain immediate review of rulings on motions under 28 U.S.C. § 1406:

> In accordance with the Supreme Court's decision in *Bankers Life & Casualty Co. v. Holland*, 346 U.S. 379, 379-84 (1953), this court has made clear that, unlike with convenience-based motions to transfer under 28 U.S.C. § 1404, mandamus ordinarily is unavailable for immediate review of rulings on motions under § 1406 asserting lack of venue under § 1400(b): a post-judgment appeal generally is an adequate remedy for asserted § 1400(b) violations. We have nevertheless found mandamus to be available for asserted § 1400(b) violations in certain exceptional circumstances warranting immediate intervention to assure proper judicial administration. But we do not find such circumstances in this case.

2018 WL 5536478, at *2 (citations omitted). Nothing has changed since the Court's prior decision that would warrant the drastic and extraordinary relief of mandamus in this case.

Google suggests that, as a result of the Court's prior decision, it is now "facing dozens of suits in the Eastern District of Texas premised on a flawed theory of

venue." Petition at 24. But the fact that Google is involved in numerous lawsuits is not, in itself, a basis for mandamus. Google is involved in 59 active patent cases nationwide. *See* SAppx43-45. Yet Google fails to identify a single one of these cases, other than this one, where a district court has found venue proper (or improper) based on Google's GGC servers and their location in the district under its contracts with ISPs. *See* Petition at 29. In fact, new evidence suggests that the issue is even *less likely* to arise in the district, since "Google took its GGC servers in the District out of service, so they are no longer serving traffic or cached content." *Id.* at 6. Thus, at least as of the date of its Petition, *Google may no longer be subject to venue based on the same facts present in this case and SEVEN*.[3]

Google also contends that an appeal is inadequate because "'the district court misunderstood the scope and effect' of this Court's precedents on venue, and intervention is necessary to provide prompt guidance to lower courts overseeing patent cases." *Id.* at 24-25. But, as the Court in *Google* noted, the district court's analysis did not clearly turn on a discrete, unanswered legal question — it turned on the application of existing legal precedent to the unique facts of this case:

> The district court focused on many specific details of Google's arrangements and activities … and examined those details under the specific language of the statute and of this court's decision in *Cray*. The court also closely examined a wide range of relevant

[3] Google's action belies the *amici's* contention that "it is impossible … to effectively plan for the future." Amici Br. at 13. Other companies have also "decommissioned equipment" in the district. *Id.* at 16.

> legal authority, including authority concerning warehouses and authority concerning machines that serve customers without their owner's employees (or indeed any human attendants) on site.

Google, 2018 WL 5536478, at *2. Thus, this case is unlike any of the cases cited by Petitioner — which were all exceptional and anything but "routine[]." Petition at 24-25. All of those cases involved discrete legal issues of first impression that were created by the Supreme Court's decision in *TC Heartland*. *See In re ZTE (USA) Inc.*, 890 F.3d 1008, 1011 (Fed. Cir. 2018) (addressing whether Federal Circuit or regional law applies and who has the burden of persuasion); *In re BigCommerce, Inc.*, 890 F.3d 978, 981 (Fed. Cir. 2018) (addressing whether a defendant can reside in more than one district in a multi-district state); *In re Micron Tech., Inc.*, 875 F.3d 1091, 1095-96 (Fed. Cir. 2017) (addressing waiver after *TC Heartland*); *Cray*, 871 F.3d at 1360-64 (addressing the meaning of "regular and established place of business").[4]

In contrast, here the district court adopted its prior analysis from *SEVEN*. Appx2. As the Court in *Google* recognized, "the scope of [that] decision is, in many respects, 'unclear,'" so "it is not known if the district court's ruling involves the kind of broad and fundamental legal questions relevant to § 1400(b) that [the Court] ha[s] deemed appropriate for mandamus despite the general adequacy of ordinary post-

[4] *In re EMC Corp.,* 677 F.3d 1351, 1355-56 (Fed. Cir. 2012), is plainly distinguishable, as it involved a petition for writ of mandamus from a denial of a motion to transfer under 28 U.S.C. § 1404.

judgment appeal for rulings on venue motions under § 1406." 2018 WL 5536478, at *2. Nothing in the district court's order makes the scope of its prior decision in *SEVEN* any less unclear. Because this case involves the routine application of existing precedent to the unique facts of this case, and not some broad fundamental legal issue of first impression, Google has an adequate remedy of direct appeal.

B. Mandamus Is Not Appropriate Under the Circumstances.

Even if Google could demonstrate that it has no other adequate means to attain relief, and could show that the right to issuance is clear and indisputable (it cannot), Google must still show that "the writ is appropriate under the circumstances." *HTC*, 890 F.3d at 1011. It fails to do so.

As explained above, this case does not clearly involve a basic, undecided question of law on a substantial issue. *See Google*, 2018 WL 5536478, at *2. The question before the Court is not simply whether the statute requires "real property staffed by employees or other agents of the defendant." Petition at 30. This case involves the application of existing precedent to the specific nature of Google's business and the particular facts of this case. Thus, contrary to Google's argument, the district court's decision will not clearly impact a broad class of cases. *See id.* As the district court clarified in its decision below, its ruling cannot have wide-ranging impact because it is based on the particular facts of this case:

> By its holding in *SEVEN*, the Court neither intends nor approves the view that venue is proper everywhere. … [I]t is the *specific*

> *nature of Google's business* and the *particular facts of this case* that lead the Court to conclude that the GGC servers are a "regular and established place *of* business" of Google. By holding such, the Court does not intend that venue is proper in any judicial district where a defendant, owns, controls, or otherwise has a connection to a piece of property, real or personal, that is related to the defendant's business. Rather, the specific and fact-based nature, extent, and type of business will inform whether a particular place in a district qualifies as a "regular and established place of business" of the defendant. It was with a careful view toward the discovery-based evidentiary facts in that particular situation, coupled with the specific parameters of *Cray* in mind, that the Court reached its conclusions in *SEVEN*. Given the present case, which is on all fours with the facts in *SEVEN*, the Court denies the Motion.

Appx3 (citations omitted) (emphasis in original). That the district court happened to "disagree with" the analysis of other district courts does not change this fact. *See* Petition at 30.

As was true at the time of the *Google* decision, "the paucity of district court cases that have so far addressed the issue suggest that the 'extraordinary remedy' of a writ of mandamus is not currently warranted." *Google*, 2018 WL 5536478, at *3. Other than a case that was previously before the Court in *Google*,[5] Google has not identified any other case where it is being sued under the same set of facts and legal theory of venue as *Google* and this case. Google's Certificate of Interest concedes that there is no other pending case known to counsel that will be directly affected by

[5] Petition at 29 (citing *Personal Audio, LLC v. Google, Inc.*, 280 F. Supp. 3d 922 (E.D. Tex. 2017)); SAppx57, SAppx69, SAppx85.

the Court's decision. To the extent any future cases against Google involve similar allegations of venue, the issue needs more time to "percolate" so the district courts have an opportunity to issue decisions and "more clearly define the importance, scope, and nature of the issue." *Google*, 2018 WL 5536478, at *3. And, as Google admits, the facts have now changed such that Google may not be subject to venue in the district under the same legal theory. *See* Petition at 6.

Further, Google fails to identify any other decisions that involve the same or similar facts and legal question as *Google* and this case. Both *CUPP Cybersecurity LLC v. Symantec Corp.*, No. 3:18-CV-01554, 2019 WL 1070869 (N.D. Tex. Jan. 6, 2019), and *Rensselaer Polytechnic Inst. v. Amazon, Inc.*, No. 1:18-cv-00549, 2019 WL 3755446 (N.D.N.Y. Aug. 7, 2019), are distinguishable. The *CUPP* court considered whether Symantec's servers *in isolation* were evidence of a regular and established place of business in the district. *Id.* at *3. In contrast, the district court's ruling in *Google* (and here) did *not* rest on "the servers in isolation," but "rest[ed] on a variety of facts it found about Google's interests in and activities involving its servers and Google's contracts with hosting ISPs that govern the location of those servers." *Google*, 2018 WL 5536478, at *2; *see also* Appx3-4. *Rensselaer* did not concern servers at all, but instead concerned whether Amazon's lockers were regular and established places of business in the district. *See* 2019 WL 3755446, at *9-14. And the court concluded that they were.

Google also cites *Peerless Network, Inc. v. Blitz Telecom Consulting, LLC*, No. 17-CV-1725, 2018 WL 1478047 (S.D.N.Y. Mar. 26, 2018); *CDx Diagnostic, Inc. v. U.S. Endoscopy Grp., Inc.*, No. 13-CV-5669, 2018 WL 2388534 (S.D.N.Y. May 24, 2018), and *BMC Software, Inc. v. Cherwell Software, LLC*, No. 1:17-cv-01074 (E.D. Va. Dec. 21, 2017). Petition at 29-30. But these decisions are not new — they too were previously before the Court in *Google*. SAppx85-86. Further, they are also distinguishable. *Peerless* involved the presence of a piece of telecommunication equipment that routed traffic. 2018 WL 1478047, at *4. *CDx Diagnostic* involved storage units. 2018 WL 2388534, at *3. *BMC Software* involved third-party servers that were used only for backup purposes. No. 1:17-cv-01074, ECF 55 at 2. Unlike here, where the record demonstrates that Google's GGC servers independently carry out Google's business of storing and delivering information to residents of the district, the cases on which Google relies did not involve equipment (located in the district under contract) that was used to conduct fundamental aspects of the defendants' businesses.

To the extent that other cases involve "'equipment-based' theories" of venue (Amici Br. at 12), they have not had sufficient time to percolate and result in additional district court decisions.

C. Google Does Not Have a Clear and Indisputable Right to Mandamus.

Even if mandamus were Google's only available remedy (it is not), Google

has not shown a "clear and indisputable" right to that remedy because the district court's determination that Google's Edge Nodes are a "regular and established place of business" finds at least a substantial basis in the language of § 1400(b), the Court's decision in *Cray*, and other legal authority. *See Google*, 2018 WL 5536478, at *3 (finding no "'clear and indisputable' error in the district court's resolution of [an] issue" where the "resolution [had] at least a substantial basis in the language of the statute … and in various precedents following the text").

Google contends that its Edge Nodes are not places of business because they: (i) are not real property; (ii) are not staffed by Google employees; and (iii) provide an insubstantial amount of data to residents in the Eastern District of Texas. Google's arguments attempt to narrow the scope of § 1400(b) by adding requirements that are not included in the statute and not supported by *Cray*.

1. The Edge Nodes Are "Places."

Google and the *amici* argue that Google's Edge Nodes do not satisfy the *Cray* test as a "place of business" because the GGC servers are objects and not places. Petition at 15 ("The phrase 'place of business' … refers to a 'building' or 'quarters.' It does not include a physical object simply because it occupies physical space.") (citation omitted); Amici Br. at 5-11. But the district court did not find that Google's servers in isolation were places of business. To the contrary, the district court found that the "place" was both the server *and the leased location occupied by the server*,

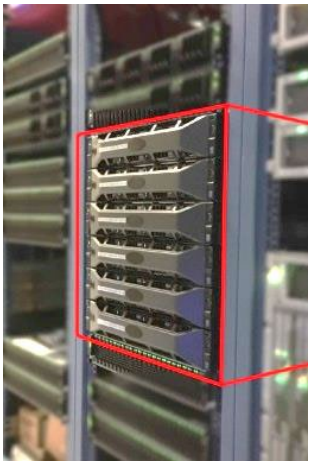
both of which were under the exclusive control of Google. *SEVEN*, 315 F. Supp. 3d at 965.

The district court properly applied *Cray*, which ruled that a "place" is not limited to a "building," but includes also "a part of a building set apart for any purpose." *See Cray*, 871 F.3d at 1362. Google does not dispute that its GGC servers take up space that is "a part of a building set apart for a[] purpose" — namely, for Google to conduct its business of storing and delivering content to users in the district (as illustrated below).

Part of a Building Set Apart for a Purpose

Exterior

Interior Rack Spaces



Google GGC Servers

In addition, *Cray* also cited *Black's Law Dictionary*, which defines "place" as a "locality, limited by boundaries." *Id.* A "locality, limited by boundaries" is certainly not limited to a building and may include, *inter alia*, a locality within a building. Indeed, *Cray* explained that a place "*need not be* a 'fixed physical presence *in the sense of a formal office or store*.'" *See id*. (emphases added). Under *Cray*,

there must be only "*a physical, geographical location* in the district from which the business of the defendant is carried out." *Id.* (emphasis added). Google's GGC servers meet this requirement. They are physical places in which Google stores and from which it delivers its products (data, apps, and information) to customers. Google's GGC servers are housed in physical racks, which are themselves places located in physical, geographical locations in the district. *See SEVEN*, 315 F. Supp. 3d at 950-54.

Google's claim that a rack is not a "place" is contradicted by *Peerless*, one of the cases upon which Google relies most heavily in the Petition. In that case, the defendant owned telecommunications equipment that was stored on a shelf in a building, and, as here, one of the issues was whether the shelf where the equipment was stored was a "place" under the statute. *See* 2018 WL 1478047, at *3. Citing *Cray*, the district court held that it was: "The shelf is a 'physical place in the district' insofar as it is '[a] building or a part of a building set apart for any purpose.'" *Id.* (quoting *Cray*, 871 F.3d at 1362).[6]

Like the shelf in *Peerless*, the racks on which Google's GGC servers are housed, or the space occupied by the servers, are physical places in the district since

[6] While the court in *Peerless* concluded that the shelf was not a place "of business," neither party in that case "paint[ed] an especially pellucid picture of what, exactly, the equipment d[id]." 2018 WL 1478047, at *3. In contrast, Google's GGC servers independently carry out Google's business of storing and delivering data, apps, and information to residents of the district.

they are parts of buildings set apart for a purpose. *See id.* Thus, the district court properly held in both *SEVEN* and this case that "the GGC server itself and the place of the GGC server, *both independently and together*, meet the statutory requirement of a 'physical place.'" 315 F. Supp. 3d at 954 (emphasis added); Appx2.

2. The Edge Nodes Are Places "of Business."

Google does not dispute that its proprietary uStreamer software operating on its GGC servers "is largely 'autonomous,' 'in the sense that almost all decisions related to serving a particular request are made locally, without coordinating with other servers.'" *SEVEN*, 315 F. Supp. 3d at 949. A server handles requests for content by first determining whether the content is stored in its cache. *Id.* at 948-49. If the requested content is stored in its cache, the server sends it to the user. *Id.* at 949. If not, the server independently decides whether to send the request to other servers and, depending on how popular the request is, whether to store it so it can be sent in response to future requests. *Id.* This is like a clerk receiving a product request, determining whether it has the product in the store, deciding whether it needs to fetch it from the warehouse, and deciding whether the product is popular enough to stock in inventory.

This detailed information about the function of Google's GGC servers and its uStreamer software was not available to the court in *Personal Audio*. The court therefore did not know that the servers were designed to conduct Google's business

independently. But the district court had that information in this case (and in *SEVEN*). Accordingly, it found that "[a] revisiting of the ultimate decision in *Personal Audio* on this issue is not only possible but compelled by the facts of this case." *Id.* at 950. Google's reliance on *Personal Audio* is therefore misplaced. Indeed, Google does not deny that its data products are stored and delivered as described above. Instead, Google argues — contrary to its own business model — that the business of storing and delivering products cannot be performed if a person is not present. Petition at 11-12. But whether such functions are performed by software or by a human clerk makes no difference. The GGC servers are conducting Google's business of storing, organizing, and distributing data, apps, and information.

Google's Edge Nodes function as local warehouses, much like a shoe manufacturer might have warehouses around the country. Instead of requiring people to obtain information from distant Core Data Centers, which would introduce delay, Google stores information in the local GGC servers to provide quick access to the data. Indeed, the only relevant difference between a warehouse that stores a company's tangible products and Google's GGC servers is the nature of the products being stored — physical merchandise versus digital content and software. In either case, storing popular content locally allows for more efficient and faster delivery of the product, which benefits both the business and its customers.

Regardless of what the products may be, if the physical structure that stores them is "a physical, geographical location in the district from which the business of the defendant is carried out," that structure is a place of business under § 1400(b). *See Cray*, 871 F.3d at 1362; *see also SEVEN*, 315 F. Supp. 3d at 959 ("There is no question that warehouses are properly considered places of business and have been so held, by both legislatures and courts."); *In re Cordis Corp.*, 769 F.3d 733, 737 (Fed. Cir. 1985) (denying mandamus where defendant's representative "continually maintain[ed] a stock of its products within the district").

Google does not seriously contend that the GGC servers are not places of business because they store digital, as opposed to tangible, products. Nor does it deny that warehouses can be places of business for establishing venue. Instead, it argues that the "analogy boomerangs" because "[a] warehouse has both the necessary characteristics of a 'place of business'—it is real property, and it is staffed by actual employees of the business." Petition at 17 n.3. Google is incorrect. A warehouse is merely a structure — and is not necessarily real property. Further, a warehouse is not necessarily staffed by employees — it can be fully automated. SAppx91-95. Moreover, a "staff of human employees" is not a statutory requirement for a location to qualify as a place of business.

In addition, the district court's ruling does not allow *any* "physical" object — such as a smartphone or computer — to qualify as a regular and established place of

business. Petition at 15, 17 (suggesting that a computer, cell phone tower, piece of railroad track, or mailbox might satisfy the statute). The district court squarely rejected this contention in its decision below, ruling that it "does not intend that venue is proper in any judicial district where a defendant owns, controls, other otherwise has a connection to a piece of property, real or personal, that is related to the defendant's business." Appx3. Instead, the district court rested its decision on "the specific nature of Google's business and the particular facts of this case," which is consistent with the Court's decision in *Cray*. *Id.* Google's arguments regarding computers, cell towers, mailboxes, or railroad tracks fail to meet that standard. More importantly, whether another set of facts will lead to a finding that venue is proper is not before this Court. Such fact-intensive inquiries are the domain of the district courts which, in the exercise of their sound discretion, are trusted to apply the law to the facts of each case. That Google's Edge Nodes are places of business under the facts of this case will not inevitably lead district courts to conclude that railroad tracks and cell phones are also places of business.

3. Google's Edge Nodes Are "Regular and Established."

Google argues that its business in the Eastern District of Texas is not regular and established because, under the Global Cache Agreements between Google and the ISPs, either party can terminate the agreement at any time and the ISPs can move the GGC servers from one location to another. Petition at 19-20. But it is irrelevant

that the agreements have termination clauses. Under Google's reasoning, a business that had been operating in a leased building for 20 years would not be regular and established if the lease had a termination clause. This is nonsensical.

Google's GGC servers have been operating (i) in Tyler under the Global Cache Agreement with Suddenlink since at least December 2015, and (ii) in Sherman and Texarkana under the agreement with CableOne since at least August 2015. *See SEVEN*, 315 F. Supp. 3d at 951 n.28. Google values the GGC servers because they provide a "[s]calable *long term* solution for edge content distribution." *Id.* at 957 (emphasis added). Indeed, Google's business model is built around its three-tier server network, which includes the Edge Nodes.

Further, the ISPs cannot move the servers without Google's consent, and there is no evidence that any have been moved since they were first installed. *See id.* at 952 ("There is no dispute that the Suddenlink Agreement requires that, in order for an ISP to move a previously installed GGC from one location to a new location, it must secure Google's permission, *which Google may not permit 'at its sole discretion.'*") (emphasis in original).

In view of this record, the district court properly found that Google's GGC servers steadily, uniformly, and methodically provide content to residents of the Eastern District of Texas, and that they have been doing so for years.

4. Google's Edge Nodes Are Places *of Google*.

Google contends that its Edge Nodes are not places *of Google* because the Global Cache Agreements between Google and the ISPs are "service" agreements not "leases," and the ISPs exert control over the buildings where the Edge Nodes are housed. Petition at 20-21. Google's attempt to characterize the Global Cache Agreements as mere "service" agreements exalts form over function. And it is irrelevant whether the ISPs control the buildings that house the Edge Nodes. As explained below, the Edge Nodes are places of Google because Google leases the spaces where the servers are housed, and it exercises attributes of possession and control over those spaces.

Much like a national company that leases spaces in local shopping malls to bring its products closer to local consumers, Google rents rack spaces from ISPs like Suddenlink and CableOne to bring its products closer to residents of the Eastern District of Texas. Under Google's Global Cache Agreements, ISPs provide Google with space in their facilities — i.e., rack space for housing Google's GGC servers. *See SEVEN*, 315 F. Supp. 3d at 949, 965. Both parties benefit under the agreement. The ISPs "save both bandwidth and costs" by hosting the GGC servers, and Google receives "improve[d] performance [and] user happiness." *Id.* at 949. The agreements constitute a lease under New York law. *See In re Stoltz*, 315 F.3d 80, 89-90 (2d Cir. 2002) ("[A] lease is '[a] contract by which a rightful possessor of real property

conveys the right to use and occupy that property in exchange for consideration.'").

The ISPs have no control over GGC servers. The Global Cache Agreements make this clear. They state that "[a]ll ownership rights, title, and intellectual property rights in and to the Equipment [including the GGC servers] shall remain in Google and/or its licensors." *SEVEN*, 315 F. Supp. 3d at 949, 952-53 (emphasis omitted). They also bar the ISP from using or accessing the equipment without Google's prior written consent:

> THE EQUIPMENT OR ANY PORTION THEREOF MAY NOT BE USED, COPIED, TRANSFERRED, REVERSE-ENGINEERED, OR MODIFIED EXCEPT AS EXPRESSLY PERMITTED BY THIS AGREEMENT. Host must not, without the prior written consent of Google (which may be withheld in its sole discretion), access, use, or dispose of the Equipment, in whole or in part.

Id. at 953. Further, the ISP cannot move the equipment without Google's consent: "Host may propose relocation at any time. *Google, at its sole discretion, may elect not to accept the proposed relocation* but will reasonably consider any such relocation and discuss all reasonable options with Host." *Id.* at 952 (emphasis in original).

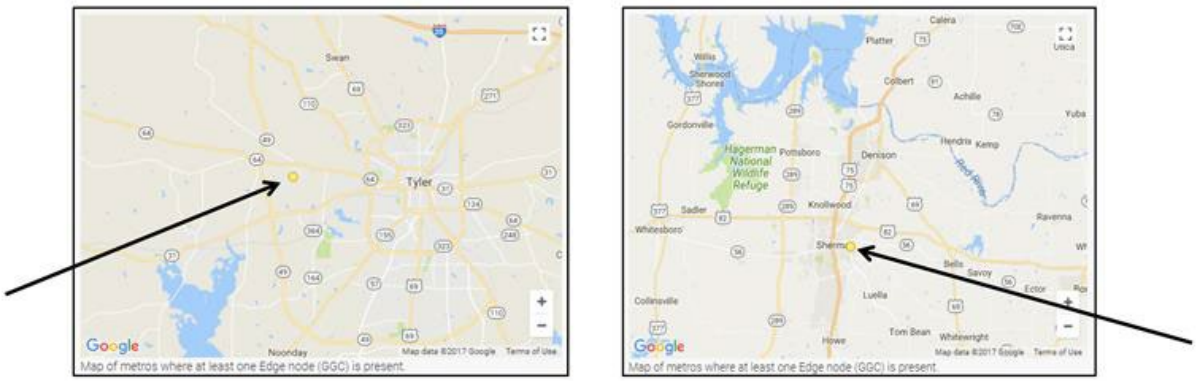
In addition, all repair activities are controlled by Google. The ISP can do nothing — not even turn off the power or tighten a loose screw — without Google's express permission and instructions. *See id.* at 953 ("Google's total control over the GGC server's physical presence within the ISP may be best illustrated by the

Suddenlink Agreement's requirement that tasks such as the 'physical switching of a toggle switch;' 'power cycling equipment (turning power on and/or off);' and '*tightening screws*, cable ties, or securing cabling to mechanical connections, plug;' may be performed 'only with specific and direct step-by-step instructions from Google.'") (emphasis in original).

Google could have adopted different agreements that provided for less control over its servers and server shelf space. But it did not. Under the agreements, the ISPs are not permitted to do anything with or in the rack space set aside for and occupied by a Google server — it is Google's place. An ISP cannot move or access servers, or even turn them on or off, without Google's permission. Without Google's permission, an ISP cannot take a Google server out of the space or put anything else in it. The facts of this case are even stronger than those of *Peerless*, where the district court found that a "shelf [wa]s 'a place of the defendant,' even if the shelf is figuratively land-locked inside of [host's] territory" and defendant's "employees must gain [host's] permission to visit their shelf." 2018 WL 1478047, at *3.

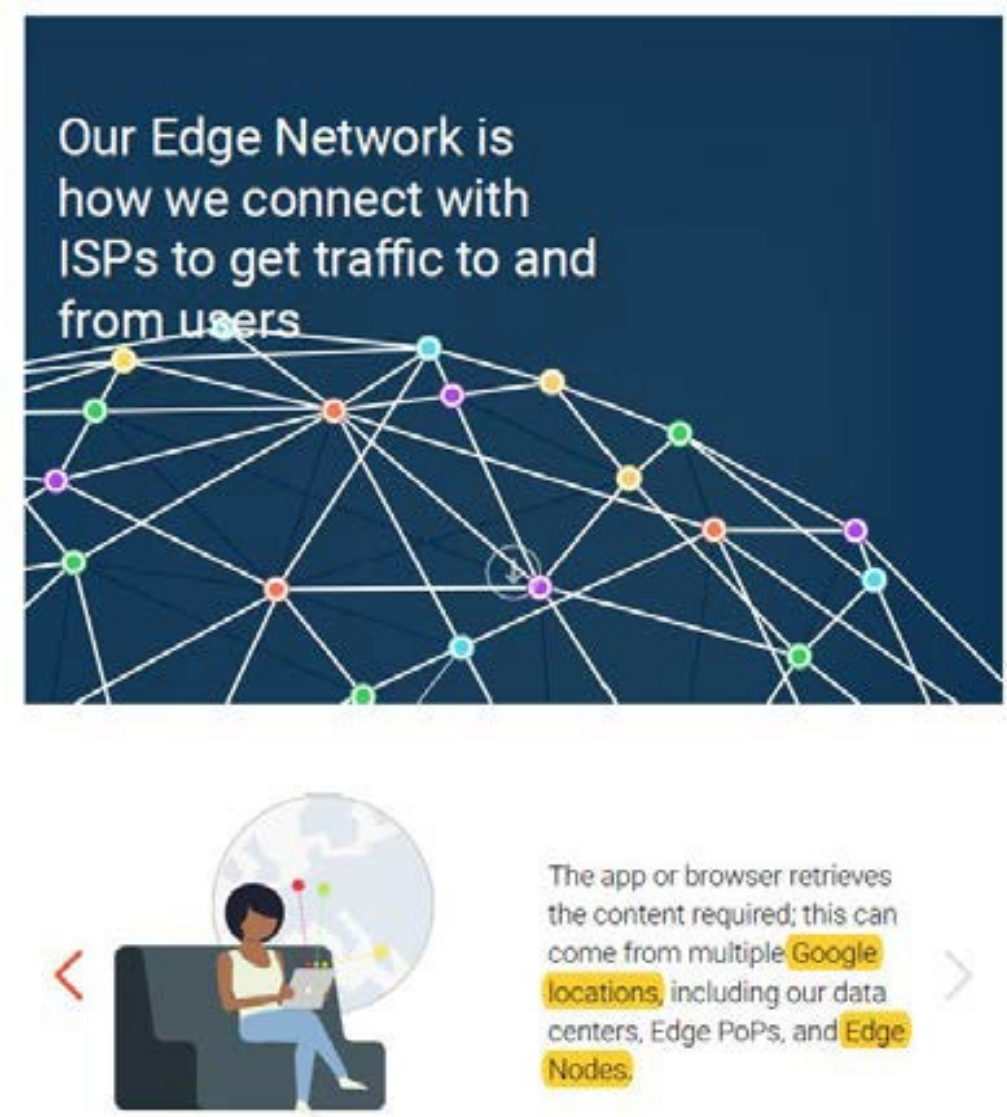
Finally, Google established or ratified its places of business in Tyler and Sherman by listing them on its website. *See Cray*, 871 F.3d at 1363. Google has a series of web pages devoted to explaining its network infrastructure. SAppx97-101. The page devoted to GGC servers has a "[m]ap of metros where at least one Edge node (GGC) is present." *Id.* As shown below, the map displayed Tyler and Sherman

as two of those "metros" (i.e., metropolitan areas). (*See* added annotation arrows pointing to the locations of the Edge servers).



SAppx14; *see also SEVEN*, 315 F. Supp. 3d at 966 n.51.

Further, Google tells the public that its GGC servers are places "of Google." Google states on its website that "Our Edge Network is how we connect with ISPs to get traffic to and from users" and that this content traffic "can come from multiple *Google locations*, including our data centers, Edge PoPs, and *Edge Nodes*."



SAppx13.

D. The Court Should Reject Google's Attempts to Rewrite § 1400(b).

Despite Google's contention otherwise, it is not the district court that sought to "update the venue statute for the digital age" (Petition at 23), but rather Google that seeks to narrow § 1400(b) beyond its plain text by requiring that the place of business also be (a) a place of *employment* and (b) a place of *substantial and important* business. Neither of these requirements are supported by the statute or

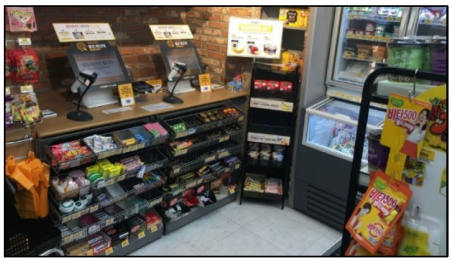
Cray. As the district court properly ruled in *SEVEN*, "[t]he mandates of *In re Cray* requiring that a court's 'analysis must be closely tied to the language of the statute' prevent[] both the removal of statutory requirements and the addition of extra-statutory requirements with equal force." 315 F. Supp. 3d at 962 (quoting *Cray*, 871 F.3d at 1362).

1. A Place of Business Is Not Necessarily a Place of *Employment*.

Google argues that § 1400(b) should be rewritten to include a place-of-*employment* requirement because (i) "business is conducted *by people*" and not computers and (ii) the patent service statute allows service to be made on agents who are conducting a defendant's business. Petition at 11-13 (emphasis in original). Neither argument has merit.

Google first argument is based solely on the *Oxford English Dictionary's* definition of "place of business" and attorney argument. *Id.* at 11-12. But that definition merely states that business "is conducted" at a place of business. It does not require that *a person* conduct that business. Moreover, there is no reason to assume — especially today, when grocery stores are automated and cars can be purchased from vending machines — that business *must* be conducted by a person as opposed to a machine.

Norman Rockwell



Automated Grocery

Carvana Vending Machine

In fact, as the district court observed in *SEVEN*, Congress enacted the America Invents Act with a more contemporary view of "place of business" in mind, as demonstrated by its explicit exemption of ATMs from the definition of "regular and established business." 315 F. Supp. 3d at 962-64 (citing Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(c), 125 Stat. 284, 331 (2011)). "A plain reading of this exception indicates that ATMs and similar devices *would otherwise constitute regular and established places of business*." *Id.* at 963 (emphasis in original). This amendment is not merely a post-enactment musing of a Congressmember or a congressional committee, but a positive expression of legislative will to which the Court is bound to give effect.

Contrary to Google's suggestion, this case is unlike *Mackey v. Lanier Collection Agency & Service, Inc.*, 486 U.S. 825 (1988), where there was evidence that Congress intended to address a split among lower courts over the proper meaning of a statute. *See id.* at 838-39 & n.13. Here, there was no split. The financial

services industry sought the amendment because "[f]inancial firms do not want to be open to suit in any and all districts due simply to the presence of a branch or an ATM." *SEVEN*, 315 F. Supp. 3d at 963 n.46 (citing *Patent Reform: The Future of American Innovation: Hearing Before the S. Comm. on the Judiciary*, 110th Cong. 291 (2007) (Testimony of John A. Squires on behalf of the American Bankers Assn., et al.)). The only plausible construction of Congress' action is the one adopted by the district court below. Regardless, Google's concession that both constructions are "equally 'plausible'" shows that it lacks a *clear and indisputable* right to mandamus. Petition at 18.

The patent service statute also fails to support Google's employment requirement. Indeed, the statute provides that service "*may be made* upon [the defendant's] agent … conducting such business." 28 U.S.C. § 1694 (emphasis added). Clearly, the statute *permits but does not require* service upon an agent. In other words, the method of service set out in the statute is one alternative to other permissible methods of service. *See, e.g.*, *Werner Mach. Co. v. Nat'l Cooperatives, Inc.*, 289 F. Supp. 962, 965 (E.D. Wis. 1968) ("28 U.S.C. § 1694 is not exclusive, and the plaintiff may also effect service pursuant to rule 4, Federal Rules of Civil Procedure."); *Ruddies v. Auburn Spark Plug Co.*, 261 F. Supp. 648, 655 (S.D.N.Y. 1966) ("The service of process provisions of Rule 4 of the Federal Rules of Civil Procedure are also available to a plaintiff in a patent

infringement suit."). That the patent service statute *increases* the ways a plaintiff may serve a defendant does not import a place of employment restriction into § 1400(b).

2. A Place of Business Is Not Necessarily a Place of *Substantial and Important* Business.

Google also argues that its Edge Nodes do not meet the *Cray* test as a "place of business," because the "GGC servers [were] a tiny fraction of the GGC server network" and "not necessary for serving content." Petition at 22-23. But this argument ignores the record. Google tells the public that it "want[s] to make sure that no matter who you are or where you are or how advanced the device you are using — Google works for you," and it acknowledges that "*caching and localization are vital*" to making that happen. *SEVEN*, 315 F. Supp. 3d at 947-48 (emphasis added). If caching and localization are vital to Google's business of serving information "no matter who you are or where you are," they are vital for serving information to residents of the Eastern District of Texas. *See id.*

Further, as the district court properly ruled, "the statute does not require 'substantial' business or 'large' impact from the business being done at the place of business." *Id.* at 956; *see also San Shoe Trading Corp. v. Converse Inc.*, 649 F. Supp. 341, 345 (S.D.N.Y. 1986) ("Courts have not looked to the size of a defendant's business, or to how the size of a defendant's business within a district compares with its sales nationwide."). The plain language of the statute does not place any

restriction on the size or nature of the business (other than it be regular and established). Nor does it require the business in the district to be "necessary" for delivering goods or products. If that were the standard, online retailers would not be subject to venue in districts where they have physical stores, since they could argue that the stores are not *necessary* for selling their online goods. Such a restrictive interpretation of the venue statute cannot be correct.

CONCLUSION

For the foregoing reasons, Super Interconnect respectfully requests that this Court deny Google's Petition for Writ of Mandamus.

Dated: October 2, 2019

Respectfully submitted,

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF SERVICE

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- ☐ Fax
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Dated: October 2, 2019

/s/ Daniel F. Olejko
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Counsel for Respondent
Super Interconnect Technologies LLC

2019-126

United States Court of Appeals for the Federal Circuit

In re: GOOGLE LLC,

Petitioner.

On Petition for Writ of Mandamus to the United States District Court for the Eastern District of Texas in Case Nos. 2:18-cv-00462, -00463 (consolidated), Hon. Rodney Gilstrap

SUPPLEMENTAL APPENDIX IN SUPPORT OF RESPONDENT'S OPPOSITION TO PETITION FOR WRIT OF MANDAMUS

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Dated: October 2, 2019

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

IN RE GOOGLE LLC,

Petitioner.

On Petition for a Writ of Mandamus to the United States District Court for the Eastern District of Texas No. 2:17-cv-00442, Hon. Rodney Gilstrap

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RESPONDENT SEVEN NETWORKS, LLC'S OPPOSITION TO PETITION FOR WRIT OF MANDAMUS

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CERTIFICATE OF INTEREST

1. **The full name of every party or amicus represented in the case by the attorney.**

   SEVEN Networks, LLC.

2. **The name of the real party in interest if the party named in the caption is not the real party in interest.**

   Respondent SEVEN Networks, LLC is the real party in interest.

3. **The corporate disclosure statement prescribed in Federal Rule of Appellate Procedure 26.1.**

   SEVEN Networks, LLC is a wholly owned subsidiary of CF SVN LLC, and no publicly held corporation owns more than 10% of its stock.

4. **The names of all law firms and the partners and associates who have appeared for the party in the lower tribunal or are expected to appear for the party in this Court and who are not already listed on the docket for the current case.**

   The following attorneys represented Respondent in the district court or are expected to appear for Respondent in this Court:

   Thompson & Knight LLP: Bruce S. Sostek, Max Ciccarelli, Herbert J. Hammond, Richard L. Wynne, Jr., J. Michael Heinlen, Adrienne E. Dominguez, Justin S. Cohen, Vishal Patel, Nadia E. Haghighatian, Austin Teng, Natalie M. Cooley, Matthew Cornelia

   Michael E. Schonberg (formerly Thompson & Knight)

   McKool Smith, P.C.: Samuel F. Baxter, Theodore Stevenson, III, Eric S. Hansen, Jennifer L. Truelove, Erik Fountain

5. **The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal.**

   Google has sought a declaratory judgment of noninfringement of the patents at issue here in *Google LLC v. SEVEN Networks, LLC*,

No. 3:17-cv-04600 (N.D. Cal.), which is currently stayed. Further, the action at issue, *SEVEN Networks, LLC v. Google LLC*, No. 2:17-cv-00442 (E.D. Tex.), is consolidated with *SEVEN Networks, LLC v. Samsung Electronics Co., Ltd.*, No. 2:17-cv-00441 (E.D. Tex). As well, some of the same patents at issue here are involved in SEVEN's lawsuit against another defendant in the Northern District of Texas. *See SEVEN Networks, LLC v. ZTE (USA) Inc., et al.*, No. 3:17-cv-01495 (N.D. Tex.). The outcome of this Court's decision may affect these matters.

Dated: September 14, 2018

Respectfully submitted,

/s/ J. Michael Heinlen

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RESTATEMENT OF THE QUESTIONS PRESENTED

1. Since at least 2015, Google has owned servers in the Eastern District of Texas that are housed in parts of buildings set apart for and controlled by Google and that independently conduct the business of storing and delivering Google's products—data—to residents of the district. Google receives revenue from conducting that business, it controls the servers and the physical spaces they occupy, and it describes the places where they are housed as "Google locations."

Under the unique facts of this case, does Google have a regular and established place of business in the Eastern District of Texas?

2. The venue statute states: "Any civil action for patent infringement may be brought . . . where the defendant has committed acts of infringement and has a regular and established place of business." 28 U.S.C. § 1400(b).

Should the statute be narrowed to require a nexus between a defendant's acts of infringement and its regular and established place of business?

3. SEVEN is no longer asserting the patents that were relevant to Google's Question No. 3, which is therefore no longer an issue.[1]

[1] The patents were: U.S. Patent Nos. 8,978,158; 9,386,433; and 9,444,812. They were dropped as part of the case-narrowing procedure agreed to by the Parties and ordered by the district court. (RAppx128.)

INTRODUCTION

Google filed its first § 1406 motion before this Court defined the regular-and-established-place-of-business standard in *In re Cray*, 871 F.3d 1355 (Fed. Cir. 2017). Out of deference to that opinion, the district court started over—it mooted Google's motion, ordered the Parties to conduct *two months* of venue discovery, and permitted Google to file another § 1406 motion after that discovery was complete. (RAppx132–33.[2]) With the benefit of the resulting extensive record, the district court issued a meticulous, *forty-two-page* opinion in which it found (among other things) that: (i) Google owns servers in the district; (ii) the servers independently decide whether certain content is popular; (iii) the servers conduct Google's business of storing and delivering that content to users in the district; (iv) the servers are housed in portions of buildings set aside for and controlled by Google; (v) the governing agreements provide that Google's servers cannot be moved—or even touched—without Google's permission; (vi) Google publicly states that the servers are in *Google* locations; and (vii) Google generates revenue from the business transacted on the servers. Faithfully applying *Cray* to these facts, the court concluded that Google has a regular and established place of business in the Eastern District of Texas.

[2] Cites with the prefix "Appx" refer to Petitioner's appendix. Cites with the prefix "RAppx" refer to Respondent's appendix.

Google now asks the Court to issue a writ of mandamus—one of "the most potent weapons in the judicial arsenal"—overturning that fact-intensive decision as clear, indisputable error. *See Will v. U.S.*, 389 U.S. 90, 107 (1967). But Google's only bases for that request—improper efforts to read limitations into the patent venue statute and hyperbolic misrepresentations of the record and case law—will not support such an "extraordinary" writ. The district court repeatedly rejected Google's attempts to rewrite the statute and ignore the record. (*See* Appx12–13, 27, 29, 35–36.) SEVEN asks this Court to do the same.

Undisputed Facts Supporting the Order

Venue is appropriate in the Eastern District of Texas under the following unique facts that establish that Google conducts business in the district from portions of buildings set aside for Google. Google did not dispute these facts in the district court, nor is it contesting them here—Google simply ignores them.

Google's Business

1. Google is in the business of storing, organizing, and distributing data. (RAppx2–8; Appx177.)

2. Google's vision is "to provide access to the world's information in one click," and its mission is "to organize the world's information and make it universally accessible and useful." (RAppx1–13.)

3. Making information available to people wherever they are and as quickly as possible is critical to Google's business. (RAppx2–8.)

Google's Edge Network

4. To achieve its business goal of making information accessible to everyone as quickly as possible, Google developed a content-delivery network that it calls the Edge Network. (Appx209–13.)

5. Google's Edge Network has three elements: Core Data Centers, Edge Points of Presence, and Edge Nodes. The Core Data Centers are used for computation and backend storage. Edge Points of Presence are the middle tier of the Edge Network and connect the Core Data Centers to the internet. Edge Nodes are the layer of the network closest to users. (Appx209–13.)

6. Popular content, including YouTube videos, video advertising, music, mobile apps, and other digital content from the Google Play store, is cached on the Edge Nodes, which Google refers to as Google Global Cache (GGC). (Appx149, 162, 182–83, 185; RAppx16–18, 35–36.)

7. Storing content locally at the Edge Nodes lowers delivery costs for Google, network operators, and Internet Service Providers (ISPs). (RAppx54, 60, 63–68.)

8. Storing content locally also allows the content to be delivered more quickly, which improves user experience. (RAppx53, 55, 63–68.)

Google's GGC Servers

9. GGC servers provide content to users with Google's proprietary "ustreamer" software that Google installs on the Edge Nodes. (RAppx18–28, 77, 82, 88–90, 92–94.)

10. Ustreamer is largely autonomous, in the sense that almost all decisions related to serving a particular content request are made locally, without coordinating with other servers. (RAppx83.)

11. Ustreamer allows Google's GGC servers independently to determine what content to cache, based on local requests. (RAppx77, 82–83, 88, 90, 92–93.)

a. When a GGC server receives a content request, if the content is stored in the node's local cache, the node serves it to the end user. (RAppx77, 82–83, 88, 90, 92–93.)

b. If requested content is not already stored on the node, and the content is cache-eligible, the node will retrieve it from Google, serve it to the user, and store it for future requests. (RAppx63–68, 82–83, 88, 90, 92–93.)

Google's ISP Agreements

12. Google's Edge Nodes are located in spaces provided to Google by local ISPs. (Appx154; RAppx60.)

13. ISPs whose networks have substantial traffic to Google and are interested in

saving bandwidth may enter into Global Cache Service Agreements with Google. (Appx154; RAppx60.)

14. Under the Global Cache Service Agreements:

a. Google provides: GGC servers and software that are to be housed in the host's facilities (in spaces specifically set aside for Google); technical support; service management of the hardware and software; and content distribution services, including content caching and video streaming. (Appx138, 215–16.)

b. The ISPs provide, among other things: rack space in a physical building where Google's computer hardware is mounted; power, network interfaces, and IP addresses; remote assistance and installation services; and network access between Google's equipment and the ISP's network subscribers. (Appx138.)

c. Google owns the GGC servers and the software operating in them. (Appx139.)

d. The ISPs may not remove, or even simply move, an installed GGC server without Google's permission. (Appx138–44.)

e. The ISPs may not access, use, or dispose of Google's hardware or software without Google's permission. (Appx139, 143, 160, 173–74, 201–02, 205.)

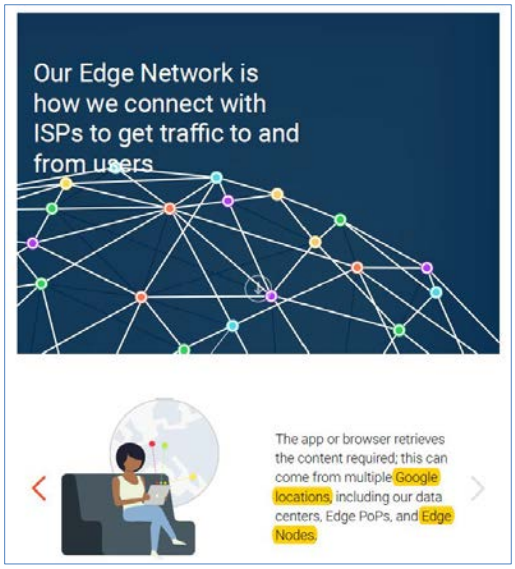
f. Without specific, step-by-step instruction from Google, the ISPs may not even turn the power to a GGC server on or off or tighten a server's screws or cable

ties. (Appx143.)

15. The Global Cache Service Agreements with local ISPs allow Google to maintain its GGC servers in physical locations close to users, which brings down Google's delivery costs, improves performance, and increases user happiness. (RAppx53, 55, 63–68.)

16. Hosting Google's GGC servers brings down delivery costs for the ISPs. (RAppx51–61; Appx148.)

17. Google publicly describes its Edge Nodes and their GGC servers, which are hosted by the ISPs, as "Google locations." (RAppx32–33.)



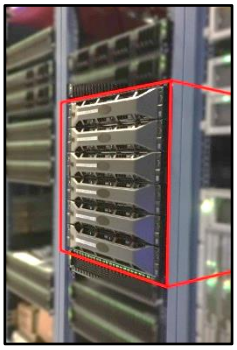
Google's Business in the Eastern District of Texas

18. Multiple ISPs hosted GGC servers in the Eastern District of Texas for at least the five months leading up to the filing of the underlying lawsuit (and they continue to do so). (RAppx98–113.)

19. Suddenlink Communications is an ISP that hosts six GGC servers in Tyler, Texas, in the building shown below. (RAppx98–106; Appx158, 162, 209–213.)

Exterior

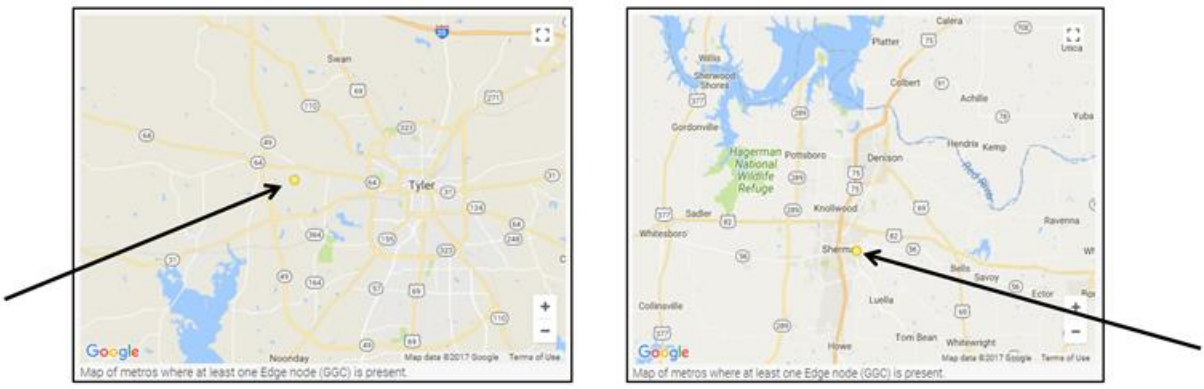
Interior Rack Spaces



Google GGC Servers

20. CableOne is an ISP that hosts three GGC servers in Sherman, Texas, and three GGC servers Texarkana, Texas.[3] (RAppx98–100, 107–13; Appx200.)

21. Google's website presents a map of metros where at least one GGC server is present and that map identifies the GGC servers in Tyler and Sherman. (Appx209–13.)



22. Google's GGC servers located in the Eastern District of Texas cache

[3] Tyler, Sherman, and Texarkana, Texas, are all in the Eastern District of Texas.

content that includes, among other things: (i) video advertising; (ii) apps; and (iii) digital content from the Google Play store. (RAppx35–36; Appx162, 182–83, 185.)

23. Google's GGC servers located in the Eastern District of Texas deliver cached content referenced in number 22, above, to users in the Eastern District of Texas. (RAppx28, 35–36; Appx148–49, 158, 161–62, 182–83, 185.)

24. Google generates revenue (i) by delivering video advertising; (ii) from apps; and (iii) from digital content in the Google Play store. (RAppx35–36; Appx185, 187, 189.)

ARGUMENTS

A. Google can obtain adequate relief on appeal.

"A writ of mandamus is a *drastic* remedy available only in *extraordinary* circumstances" and may issue only if the petitioner has no other adequate means of relief. *In re HTC Corp.*, 889 F.3d 1349, 1352 (Fed. Cir. 2018) (emphases added). The only reason Google contends appeal would be inadequate is that "the remedy [it] seeks—being spared the burden of having to litigate in a forum that is improper under federal law—cannot be secured on appeal." *See* Pet. at 27. That is not enough; indeed, this Court recently rejected the same argument in a § 1406(a) case. *See HTC*, 889 F.3d at 1354 ("Petitioner's only argument is that it should be

able to avoid the inconvenience of litigation by having this issue decided at the outset of its case. This is insufficient, and there is no other indication that Petitioner cannot be afforded adequate relief on appeal.").

Because Google can be afforded adequate relief on appeal, the writ is inappropriate.

B. Google does not have a clear and indisputable right to mandamus.

Even if mandamus were Google's only available remedy—and it is not—Google has not shown a "clear and indisputable" right to that remedy because the district court's order was not error. *See HTC*, 889 F.3d at 1352. Google's Edge Nodes meet *Cray*'s test for a "regular and established place of business" under § 1400(b). And the patent venue statute does not require a nexus between the place of a defendant's regular and established business and its infringement actions.

1. Google's Edge Nodes in the Eastern District of Texas meet the *Cray* test for establishing venue.

As this Court held in *Cray*, the test for establishing venue is whether: (i) there is a physical place in the district; (ii) that is a regular and established place of business; and (iii) is the place of the defendant. *Cray*, 871 F.3d at 1360. Applying that test to the undisputed facts of this case, venue is proper.

a. Google's Edge Nodes are places of business.

Google contends that its Edge Nodes are not places of business because they:

(i) are not real property; (ii) are not staffed by Google employees; and (iii) provide an insubstantial amount of data to residents of the Eastern District of Texas. Google's arguments narrow the scope of § 1400(b) by adding requirements that are not included in the statute and that are not supported by *Cray*.

i. The Edge Nodes are "places."

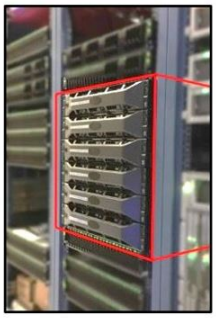
Google argues that it does not have a place of business in the Eastern District of Texas because its Edge Nodes—the GGC servers and the racks in which they are housed—are objects, not buildings. Pet. at 14 ("The 'place of business,' as this Court has explained, refers to a 'building' or 'quarters.' It does not include a physical object simply because it occupies physical space." (citing *Cray*, 871 F.3d at 1362)). Google misreads *Cray* and misrepresents the district court's order.

The question is not whether the servers are "objects" or "buildings." The question is whether Google conducts its business in the *place* where the servers are housed. One of the dictionaries cited in *Cray* defines "place" as a "'[a] building or a part of a building set apart for any purpose' or 'quarters of any kind.'" *See Cray*, 871 F.3d at 1362. The space taken up by Google's GGC servers is indisputably "a part of a building set apart for a[] purpose"—namely, for Google to conduct business—and thus meets this definition. (*See* RAppx102–06.)

Part of a Building Set Apart for Any Purpose

Exterior

Interior Rack Spaces



Google GGC Servers

But *Cray* also cited (and Google ignores) the *Black's Law Dictionary* definition of place as a "*locality, limited by boundaries.*" *Id.* (citing *Black's Law Dictionary* (1st ed. 1891) (emphasis added)).[4] A "locality, limited by boundaries" is not necessarily a building. And *Cray* explained that a place of business "*need not be* a fixed physical presence *in the sense of a formal office* or store." *See id.*, 871 F.3d at 1362 (emphases added; quotation marks omitted). All that's required is "*a physical, geographical location* in the district from which the business of the defendant is carried out." *Id.* (emphasis added). Google's GGC servers meet this requirement. They are physical places in which Google stores and from which it delivers its products (information). And as Google acknowledges, its GGC servers are housed in physical racks, which are themselves places located in physical, geographical locations in the Eastern District of Texas. (Appx155–56, 199; RAppx35–36.)

[4] *See also* Appx4 (citing additional dictionary definitions for "place," all of which support, and none of which contradicts, this Court's ruling in *Cray*).

That rack space in a building is a "place" is not controversial. Indeed, one of the cases Google relies on most heavily held that rack space is a physical place under *Cray*. *See Peerless Network, Inc. v. Blitz Telecom Consulting, LLC*, No. 17-CV-1725, 2018 WL 1478047, at *3 (S.D.N.Y. Mar. 26, 2018). In that case, the defendant owned telecommunications equipment that was stored on a shelf in a building. *See id.* As here, one of the issues was whether the shelf where the equipment was stored was a "place" under the statute. Citing *Cray*, the court held that it was: "The shelf is a 'physical place in the district' insofar as it is '[a] building or a part of a building set apart for any purpose.'" *Id.* (quoting *Cray*, 871 F.3d at 1362).[5]

The same is true here—the racks on which Google's GGC servers are housed, or the space occupied by the servers, are physical places in the district insofar as they are buildings or parts of buildings set apart for any purpose. *See id.* Applying the law set forth in *Cray* to these facts, the district court properly held that "the

[5] Unlike the case here, where the record demonstrates that Google's GGC servers independently carry out Google's business of storing and delivering information to residents of the Eastern District of Texas, in *Peerless*, "[n]either party paint[ed] an especially pellucid picture of what, exactly, the equipment d[id]." *Peerless*, 2018 WL 1478047, at *3. In fact, the communication device at issue "contain[ed] no routing instructions . . . and . . . routing decisions [were] made outside the state of New York." *Id.* Because neither the device itself nor any human agent of the defendant served customers or made business decisions in the place that housed the equipment, the court found that it was not a place "of business." *Id.* at *3–4.

GGC server itself and the place of the GGC server, *both independently and together*, meet the statutory requirement of a 'physical place.'" Appx24 (emphasis added).

ii. The Edge Nodes are places "of business."

a) Google asks the Court to rewrite the statute to state that the "place of business" must be a "place of business *and employment*."

Google does not dispute that Google's proprietary ustreamer software operating in Google's GGC servers is largely "autonomous," "in the sense that almost all decisions related to serving a particular request are made locally, without coordinating with other servers." (RAppx83.) A server handles requests for content by first determining whether the content is stored in its cache. (RAppx77, 88, 90, 92–93.) If the requested content is stored in its cache, the server sends it to the user. (RAppx77, 88, 90, 92–93.) If not, the server independently decides whether to send the request to other servers and, depending on how popular the request is, whether to store it so it can be sent in response to future requests. (RAppx77, 88, 90, 92–93.) This is like a clerk receiving a product request, determining whether it has the product in the store, deciding whether it needs to fetch it from the warehouse, and deciding whether the product is popular enough to stock in inventory.

Such detailed information about Google's GGC servers and its ustreamer software was not available to the court in *Personal Audio, LLC v. Google, Inc.*, 280 F.

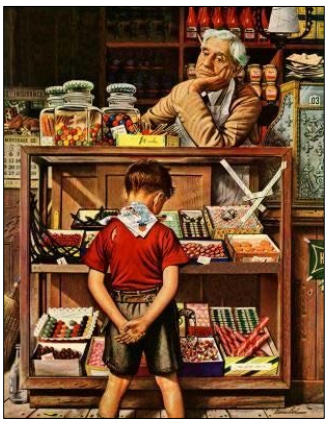
Supp. 3d 922 (E.D. Tex. 2017). The court therefore did not know that the servers were designed to conduct Google's business independently. But the district court here did have that information. Accordingly, it found that "[a] revisiting of the ultimate decision in *Personal Audio* on this issue is not only possible but compelled *by the facts of this case.*" (Appx19 (emphasis added).) Google's attempt to distinguish *Personal Audio* on this basis is ineffective.

Indeed, Google does not deny that its data products are stored and delivered as described above. Rather, it argues—contrary to its own business model—that the business of storing and delivering products cannot be performed if a person is not present. Pet. at 10–11. But whether such functions are performed by software or by a human clerk makes no difference. The GGC servers are conducting Google's business of storing, organizing, and distributing data.

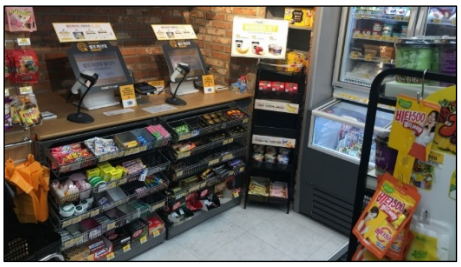
Faced with this problem, Google seeks to rewrite § 1400(b) by adding the italicized text: "where the defendant . . . has a regular and established place of business *and employment*." But as the district court properly held, "[t]he mandates of *In re Cray* requiring that a court's 'analysis must be closely tied to the language of the statute' prevent[] both the removal of statutory requirements and the addition of extra-statutory requirements with equal force." (Appx35 (quoting *Cray*, 871 F.3d at 1362).)

Without addressing or acknowledging the district court's ruling on this issue, Google now argues that § 1400(b) should be rewritten to include a place-of-*employment* requirement because: (i) "the phrase 'place of business' calls up a 'popular picture' of a company building where company employees are at work," Pet. at 11 (citing *McBoyle v. U.S.*, 283 U.S. 25, 26 (1931) (Holmes, J.)), and (ii) the patent service statute allows service to be made on agents who are conducting a defendant's business. Neither argument has merit.

As to the first, Justice Holmes's "popular picture" is no more part of the statute than are the words "place of employment." And there is no reason to assume—especially now, when grocery stores are automated and cars can be purchased from vending machines—that the "popular picture" of a business is still a Norman Rockwell vision of child in a candy shop.



Norman Rockwell



Automated Grocery

Carvana Vending Machine

In fact, as the district court observed, Congress enacted the America Invents Act with a more contemporary "picture" in mind, as demonstrated by its explicit

exemption of ATMs from the definition of "regular and established business." (*See* Appx36–39 (citing Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(c), 125 Stat. 284, 331 (2011)).) "A plain reading of this exception indicates that ATMs and similar devices *would otherwise constitute regular and established places of business*." (Appx37 (emphasis in original).) Congress's interpretation—that, unless exempted, ATMs would qualify as "regular and established places of business"—is not a change in the law, as Google suggests. *See* Pet. at 16. Rather, to "change the law" would be to write in an extra-statutory "place of employment" requirement.

Google's reliance on the patent service statute is equally misplaced. The statute states: "In a patent infringement action commenced in a district where the defendant is not a resident but has a regular and established place of business, service of process, summons or subpoena upon such defendant *may* be made upon his agent or agents conducting such business." 28 U.S.C. § 1694 (emphasis added). That service "may" be made on a defendant's "agent or agents conducting such business" does not mean that it *must* be made on such agent or agents. The statute simply provides an alternative method of service. *See, e.g.*, *Werner Mach. Co. v. Nat'l Cooperatives, Inc.*, 289 F. Supp. 962, 965 (E.D. Wis. 1968) ("28 U.S.C. § 1694 is not exclusive, and the plaintiff may also effect service pursuant to rule 4, Federal Rules of Civil Procedure."); *Ruddies v. Auburn Spark Plug Co.*, 261 F.

Supp. 648, 655 (S.D.N.Y. 1966) ("The service of process provisions of Rule 4 of the Federal Rules of Civil Procedure are also available to a plaintiff in a patent infringement suit."). If the defendant has an agent at its "regular and established place of business," that agent may be served. If it does not, service may be achieved under Federal Rule of Civil Procedure 4. That the patent service statute *increases* the ways a plaintiff may serve a defendant does not import a "place of employment" *restriction* into the patent venue statute.

b) Google asks the Court to rewrite the statute to require that the "place of business" must be a "place of *substantial and important* business."

According to Google, the Edge Nodes in the Eastern District of Texas are not places of business under the statute because they "are a 'fraction of a fraction' of one percent of the total serving capacity of Google's peering and GGC server network" and removing them from the district "would have no impact on Google's ability to deliver traffic." Pet. at 20.

Google's argument beggars credibility. Google tells the public that it "want[s] to make sure that no matter who you are or where you are or how advanced the device you are using—Google works for you," and it acknowledges that "*caching and **localization** are **vital***" for making that happen. (RAppx60; Appx190 (emphases added).) In its Petition, however, Google takes the contrary position and argues

that its local servers are not important. If caching and localization are vital to Google's business of serving you information "no matter who you are or where you are," they are vital for serving information to residents of the Eastern District of Texas. (*See* RAppx2–8.)

Further, as the district court held, "the statute does not require 'substantial' business or 'large' impact from the business being done at the place of business." (Appx27.) But once again, Google asks this Court to rewrite § 1400(b), here to require that the "place of business" must be a substantial part of a defendant's ordinary business or have a material effect on the defendant's ability to provide goods or services. And once again, Google's request "does violence to the language of the statute." (Appx29 (citing *Cray*, 871 F.3d at 1362).) The issue is simply whether the Edge Nodes are conducting the business of storing and delivering Google's data products to people in the Eastern District of Texas, and they are. *See San Shoe Trading Corp. v. Converse Inc.*, 649 F. Supp. 341, 345 (S.D.N.Y. 1986) ("Courts have not looked to the size of a defendant's business, or to how the size of a defendant's business within a district compares with its sales nationwide.").

c) Warehouses, including data warehouses like the Edge Nodes, are places of business.

Google's Edge Nodes function as local warehouses, much like a shoe manufacturer might have warehouses around the country. Instead of requiring

people to obtain information from distant Core Data Centers, which would introduce delay, Google stores information in the local GGC servers to provide quick access to the data. Indeed, the only relevant difference between a warehouse that stores a company's tangible products and Google's GGC servers is the nature of the products being stored—physical merchandise versus digital content. In either case, storing popular content locally allows for more efficient and faster delivery of the product, which benefits both the business and its customers.

Regardless of what the products may be, if the physical structure that stores them is "a physical, geographical location in the district from which the business of the defendant is carried out," that structure is a place of business under § 1400(b). *See Cray*, 871 F.3d at 1362.[6]

Google does not contend that the GGC servers are not places of business because they store digital, as opposed to tangible, products. Nor does it deny that warehouses can be places of business for establishing venue. On the contrary, it cited *Cray* to the district court in support of its contention that distribution centers can be places of business. (RAppx126.) Now, Google attempts to avoid that

[6] *See also* Appx31 ("There is no question that warehouses are properly considered places of business and have been so held by both legislatures and courts."); Appx31–32 (citing cases); *In re Cordis Corp.*, 769 F.3d 733, 737 (Fed. Cir. 1985) (concluding venue was appropriate where defendant's representative "continually maintain[ed] a stock of its products within the district").

contention, likening its servers instead to storage lockers, and characterizing two cases as standing for the proposition that "storage lockers do not qualify as places of business for purposes of the venue statute." *See* Pet. at 16 (emphasis removed) (citing *Regents of Univ. of Minn. v. Gilead Scis., Inc.*, 299 F. Supp. 3d 1034 (D. Minn. 2017); *CDx Diagnostic, Inc. v. U.S. Endoscopy Grp., Inc.*, No. 13-CV-5669, 2018 WL 2388534 (S.D.N.Y. May 24, 2018)). But neither case supports Google's proposition. In *Regents*, the court glossed over storage lockers in the context of the third *Cray* prong—"of the defendant"—not the first prong. *See Regents of Univ. of Minn.*, 299 F. Supp. 3d at 1043. And in *CDx*, the court found the opposite of what Google contends, namely that "the storage units identified by Plaintiffs *are* likely 'physical places in the district' [under the first] prong, insofar as they are 'building[s] or []part[s] of a building set apart for any purpose.'" *See CDx*, 2018 WL 2388534, at *3 (emphasis and first alteration added).[7]

iii. The district court's order does not create a "slippery slope."

Attempting to draw attention away from the district court's adherence to the statute and application of the statute to the facts, Google protests that the district court's ruling will result in "absurd outcome[s]." *See* Pet. at 14–15 (suggesting that

[7] The *CDx* court ultimately found the "regular and established" prong—and only that prong—unmet. *See CDx*, 2018 WL 2388534, at *3. Importantly, the court also based its ruling on "Plaintiffs' *withdrawal of their opposition* and *consent to a dismissal* without prejudice." *See id.* at *1 n.1, *3 (emphases added).

a computer, cell phone tower, piece of railroad track, or mailbox might satisfy the statute). It will not.

As this Court emphasized in *Cray*, "[i]n deciding whether a defendant has a regular and established place of business in a district, *no precise rule has been laid down* and *each case depends on its own facts*." *See* 871 F.3d at 1362 (emphases added). In this case, the Parties have developed detailed venue facts related to Google's Edge Nodes. Those facts demonstrate that the Edge Nodes: (i) are owned and controlled by Google; (ii) are housed in portions of buildings set aside for Google; (iii) decide whether certain products are popular; (iv) store such products; (v) deliver them directly to residents of the Eastern District of Texas upon the residents' request; and (vi) generate revenue for Google. (RAppx35, 77, 82–83, 88, 90, 92–93, 99–100.) The Edge Nodes therefore meet the regular-and-established-place-of-business standard established by *Cray* because they independently carry out Google's business in a place within the district.

Lacking similar facts, it is impossible to determine whether Google's putative computers, cell towers, mailboxes, or railroad tracks meet that standard. More importantly, whether another set of facts will lead to a finding that venue is proper is not before this Court. Such fact-intensive inquiries are the domain of the district courts which, in the exercise of their sound discretion, should be trusted to apply

law to facts correctly. That Google's Edge Nodes are places of business under the facts of this case will not, as Google laments, inevitably lead district courts to conclude that railroad tracks also are.[8]

b. Google's places of business in the Eastern District of Texas are regular and established.

Google argues that its business in the Eastern District of Texas is not regular and established because, under the Global Cache Agreements between Google and the ISPs, either party can terminate the agreement at any time and the ISPs can move the GGC servers from one location to another. Pet. at 17. Google ignores the record.

First, it is irrelevant that the agreements have termination clauses.[9] Google's GGC servers have been operating (i) in Tyler under the Global Cache Agreement with Suddenlink since at least December 2015, and (ii) in Sherman and Texarkana

[8] And perhaps if a district court were to decide that a railroad track is a place of business, that decision—depending on the facts—might rise to the level of "clear abuse of discretion" sufficient to warrant a writ of mandamus. But that is not the case here. On the contrary, the district court acted well within its discretion in applying the standard articulated in *Cray* to the facts before it. If the Court concludes that this fact-specific case is a proper vehicle for mandamus, it may confront a "slippery slope" concern of a different kind—indeed, if a writ can issue each time novel venue facts arise, every defendant dissatisfied with a venue ruling will ask this Court for a do-over.

[9] Under Google's reasoning, a business that had been operating in a leased building for twenty years would not be regular and established if the lease had a termination clause. Of course, this is nonsensical.

under the agreement with CableOne since at least August 2015. (RAppx98–113.)

Second, the ISPs cannot move the servers without Google's consent, and there is no evidence that any have been moved since they were first installed. (Appx138–44, 231.)

Third, Google values the GGC servers because they provide a "scalable *long term* solution for edge content distribution." (RAppx60.) Indeed, Google's business model is built around its three-tier server network, which includes the Edge Nodes.

Fourth, Google provides servers to ISPs only if they maintain three gigabytes per second of peak traffic—i.e., three gigabytes of cacheable data per second—through their networks over a period of several weeks. (Appx154.) Google GGC traffic reports, which record the peak rate of traffic (including video, video ads, and Android Market [now called Google Play]) exiting servers in the Eastern District, show this peak-rate requirement was met every day over a period of months leading up to this lawsuit. (RAppx115.)

In view of this record, which Google failed to present to this Court, the district court properly held that Google's GGC servers steadily, uniformly, and methodically provide content to residents of the Eastern District of Texas, and that they have been doing so for years. (*See* Appx29–30.) Google's business in the

District is regular and established.

c. Google's Edge Nodes in the Eastern District of Texas are places *of Google*.

Google contends that its Edge Nodes are not places *of Google* because the Global Cache Agreements between Google and the ISPs are "service" agreements not "leases," and the ISPs exert control over the buildings where the Edge Nodes are housed. Google's attempt to characterize the Global Cache Agreements as mere "service" agreements exalts form over function. And it is irrelevant whether the ISPs control the buildings that house the Edge Nodes.

Following *Cray*, "[r]elevant considerations [for determining whether a place is 'of the defendant'] include whether the defendant [i] *owns* or [ii] *leases* the place, or [iii] e*xercises attributes of possession or control* over the place." *Cray*, 871 F.3d at 1363 (emphases added). As explained below, Google leases the spaces where the servers are housed, *and* it exercises attributes of possession and control over those spaces.

i. "A rose by any other name . . ."—Google leases the rack spaces that house its GGC servers.

Much like a national company that leases spaces in local shopping malls to bring its products closer to local consumers, Google rents rack spaces from ISPs like Suddenlink and CableOne to bring its products closer to residents of the Eastern District of Texas. Under Google's Global Cache Agreements, ISPs provide Google with space in their facilities—i.e., rack space for housing Google's GGC

servers. (Appx138–144.) Google explained that ISPs do this in exchange for the ability to become part of Google's Edge Network:

> [I]f the ISP wishes to host GGC, they have to provide that space to rack the servers. . . . [T]o be part of the program, Google provides the servers and then the ISP has to provide certain things: remote hands, server space, some operational support and commitments.

(Appx199.) In short, both parties benefit: "Google is providing something to the ISPs that the ISPs consider to be valuable," and "Google receives the benefit of happier users." (Appx148–49, 151, 177–70, 198, 203; RAppx46–47, 53, 55, 60.)

Thus, under New York law, which governs the agreements (Appx138–44), Google leases the rack space from the ISPs: "[A] lease is '[a] contract by which a rightful possessor of real property conveys the right to use and occupy that property in exchange for consideration.'" *In re Stoltz*, 315 F.3d 80, 89–90 (2d Cir. 2002) (quoting *Black's Law Dictionary* 898 (7th ed. 1999)); *see also Beitner v. Becker*, 824 N.Y.S.2d 155, 156 (2006) ("All contracts must be supported by consideration, consisting of *a benefit to the promisor* or a detriment to the promisee." (emphasis added)).

The court in *Peerless* addressed the same issue under similar facts. In that case, "[t]he full extent of Defendants' physical presence in the Southern District of New York [was] a shelf containing a piece of [defendant] Local Access's

telecommunications equipment." *Peerless*, 2018 WL 1478047, at *3. The equipment occupied about sixteen inches of shelf space in the hosting facility. *Id.* Local Access never accessed the equipment, and it could not have done so unless escorted by the host's security personnel. *Id.* The issue was whether Local Access had control over the shelf that contained its equipment. The court found that it did:

> [A]ssuming that Local Access rents the shelf on which its equipment rests, the Court is satisfied that the shelf is "a place of the defendant," even if the shelf is figuratively land-locked inside of [host's] territory. The fact that Local Access employees must gain [host's] permission to visit their shelf does not change the fact that, as alleged, the shelf belongs to Local Access.

Id.

The facts supporting the district court's venue ruling here are even stronger. Both the servers and the physical locations where they are housed are under Google's exclusive control. Indeed, Google's ownership and control over the servers and their contents are absolute, and the ISPs cannot enter the spaces they occupy or move them to new spaces without Google's permission. (Appx138–44, 160, 173–74, 201–02, 204–05.) Under these facts, the district court properly determined that Google's Edge Nodes in the Eastern District of Texas are places *of Google*. (*See* Appx39–40.)

ii. Google controls its Edge Nodes.

The ISPs have no control over the GGC servers. The Global Cache

Agreements make this quite clear. First, they state that "[a]ll ownership rights, title, and intellectual property rights in and to the Equipment [including the GGC servers] shall remain in Google and/or its licensors." (Appx138–44.) Second, they bar the ISP from using or accessing the equipment without Google's prior written consent:[10]

> THE EQUIPMENT OR ANY PORTION THEREOF MAY NOT BE USED, COPIED, TRANSFERRED, REVERSE-ENGINEERED, OR MODIFIED EXCEPT AS EXPRESSLY PERMITTED BY THIS AGREEMENT. Host must not, without the prior written consent of Google (which may be withheld in its sole discretion), access, use, or dispose of the Equipment, in whole or in part.

(Appx139.)

Third, the ISP cannot move the equipment without Google's consent:

> Host may propose relocation at any time. **Google, at its sole discretion, may elect not to accept the proposed relocation** but will reasonably consider any such relocation and discuss all reasonable options with Host.

(Appx139 (emphasis added).)

Fourth, all repair activities are controlled by Google. The ISP can do nothing—not even turn off the power or tighten a loose screw—without Google's

[10] That Google may not enter the building where a GGC Server is housed (*see* Google's argument at Pet. 19) does not give the ISP control over the server or the right to do anything with or to it once it has been installed. *See, e.g.*, *Peerless*, 2018 WL 1478047, at *3.

express permission and instructions:

> Some configuration or running of certain maintenance operations will be provided upon approval by host, which approval will not be unreasonably withheld or delayed, and **only with specific and direct step-by-step instructions from Google**. Examples of Remote Assistance Services available include the following: physical switching of a toggle switch; power cycling equipment (**turning power on and/or off**); remote visual observations and/or verbal reports to Google on its specific collocation cabinet(s) for environment status, display lights, or terminal display information; labeling and dress-up of cabling within cabinet; **tightening screws**, cable ties, or securing cabling to mechanical connections, plug; replacing existing plug-in only hardware such as circuit cards with spares or upgrades.

(Appx143 (emphases added).)

Google confirmed this in the hearing on its venue motion:

> THE COURT: I mean, as I recall the briefing, it's laid out there that the ISPs can't even tighten a loose screw on the server without getting Google's permission. They can't open the server. They can't really touch it or move it. Whether it's to be moved to another rack in that physical location or to be moved to a rack in another physical location, Google has to give permission basically for the ISPs to have any physical contact with the server at all, correct?
>
> [COUNSEL FOR GOOGLE]: No. You're correct in the first part of that, Your Honor, definitely. They're not allowed to open the server. You're not allowed to manipulate the server. You're not allowed to unscrew the form factor and take it apart, Your Honor.

(RAppx121.)

In short, the ISPs are not permitted to do anything with or in the rack space set

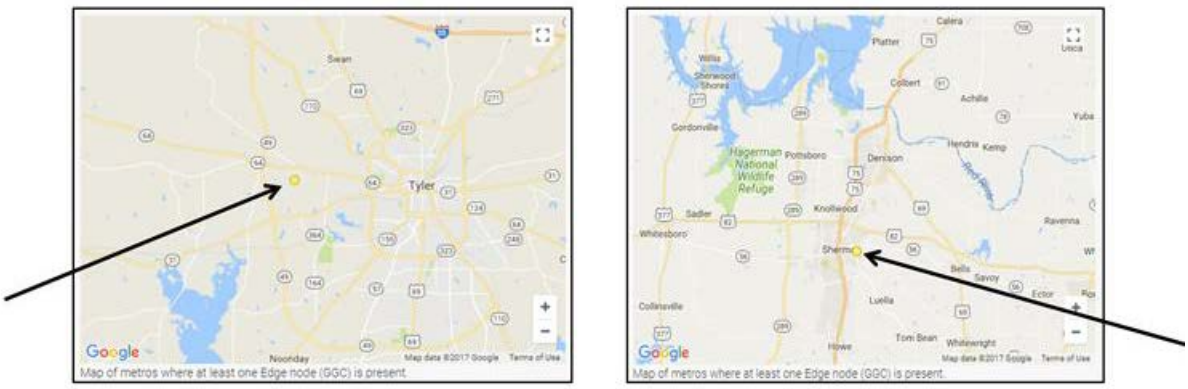
aside for and occupied by a Google server—it is Google's place. An ISP cannot move or access servers, or even turn them on or off, without Google's permission. Without Google's permission, an ISP cannot take a Google server out of the space or put anything else in it. Under these facts, the district court properly held that the Edge Nodes are under Google's absolute possession and control. (Appx40.)

Google could have avoided this consequence by adopting a different model for delivering its localized content. Just like a product manufacturer may choose to sell its products through independent local retailers rather than through a network of factory-owned stores, Google could have contracted with third parties to cache and serve Google's content from local equipment owned and controlled by the third-parties. Google instead chose to exert control by owning the equipment, renting space in the district for that equipment, and excluding third parties from taking any action with respect to the equipment. Google cannot have it both ways. Having chosen to conduct business in the Eastern District of Texas, it cannot avoid being subject to venue there.

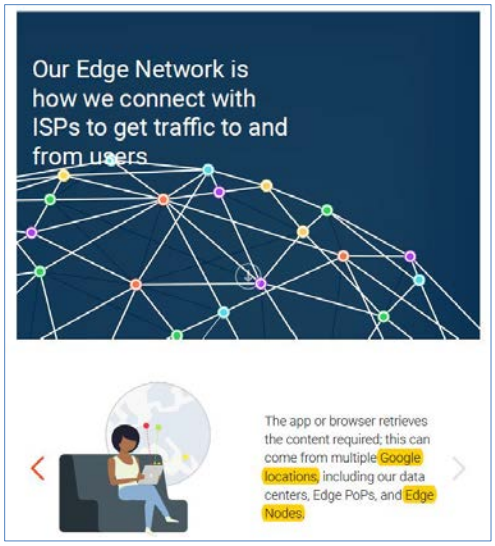
iii. Google ratifies its Edge Nodes as places of Google.

Finally, Google has "establish[ed] or ratif[ied] the place[s] of business" in Tyler and Sherman by listing them on its website. *See Cray*, 871 F.3d at 1363. Google has a series of web pages devoted to explaining its network infrastructure.

(Appx209–13.) The page devoted to GGC servers has a "map of metros where at least one Edge node (GGC) is present." (Appx209–13.) As shown below, the map displays Tyler and Sherman as two of those metros (arrows pointing to the Edge servers added).



Further, Google tells the public that its GGC servers are places "of Google." Google states on its website that "Our Edge Network is how we connect with ISPs to get traffic to and from users" and that this content traffic "can come from multiple *Google locations*, including our data centers, Edge PoPs, and *Edge Nodes*." (RAppx32–33 (emphases added).)



In sum, Google's Edge Nodes in the Eastern District of Texas satisfy *Cray's* regular-and-established-place-of-business standard. They have been located in physical, geographical locations in the district since 2015; Google regularly and continuously uses them to conduct the business of storing and delivering its products to residents of the district; Google receives revenue from doing so; Google leases the rack space in which they are housed; Google exercises attributes of possession and control over them; and Google has ratified them as places of its business. Google's Edge Nodes are therefore regular and established places of business that establish venue under § 1400(b).

2. SEVEN's infringement allegations establish venue.

Google argues that SEVEN's infringement allegations are insufficient because they do not allege a nexus between Google's acts of infringement in the Eastern District of Texas and its regular and established place of business in the district. But the venue statute does not require such a nexus. Section 1400(b) provides that venue is proper "where a defendant has committed acts of infringement *and* has a regular and established place of business." 28 U.S.C. § 1400(b) (emphasis added). It does not state "where the defendant has committed acts of infringement *at their* regular and established place of business." As long as the two requirements are satisfied in a particular district—i.e., as long as the defendant has committed acts of

infringement in the district and has a regular and established place of business in that same district—venue is proper.[11]

The overwhelming majority of courts agree. Indeed, Google cites only two decisions, both before 1982, that required a relationship between the accused item and the regular and established place of business.[12] Most, if not all, of the other early cases held to the contrary, and SEVEN has not found any recent cases that require a relationship between the act of infringement and the regular and established place of business.[13]

---

[11] Contrary to Google's argument, the Court does not need to read a nexus requirement into the venue statute to make it more demanding than the standard for establishing personal jurisdiction. *See* Pet. at 21–23 (citing *Bristol-Myers Squibb Co. v. Superior Court of Cal.*, 137 S. Ct. 1773, 1780 (2017) for the proposition that to establish specific personal jurisdiction, "the suit must arise out of or relate to the defendant's contacts with the forum"). The very fact that the venue statute requires both an act of infringement and a regular and established place of business makes it more demanding. The jurisdictional requirement would be met by an act of infringement (anywhere in the state) alone.

[12] *See Scaramucci v. FMC Corp.*, 258 F. Supp. 598, 602 (W.D. Okla. 1966); *Jeffrey Galion, Inc. v. Joy Mfg. Co.*, 323 F.Supp. 261, 266–67 (N.D. W. Va. 1971).

[13] *See Mallinckrodt IP v. B. Braun Med. Inc.*, No. CV 17-365-LPS, 2017 WL 6383610, at *2 n.2 (D. Del. Dec. 14, 2017); *Plexxikon Inc. v. Novartis Pharm. Corp.*, No. 17-CV-04405-HSG, 2017 WL 6389674, at *2 (N.D. Cal. Dec. 7, 2017); *UCB, Inc. v. Mylan Techs., Inc.*, No. CV 17-322-LPS, 2017 WL 5985559, at *3 n.4 (D. Del. Dec. 1, 2017); *Bristol-Myers Squibb Co. v. Mylan Pharm. Inc.*, No. CV 17-379-LPS, 2017 WL 3980155, at *20 (D. Del. Sept. 11, 2017); *Cabot Corp. v. WGM Safety Corp.*, 562 F. Supp. 891, 892 (D. Mass. 1983); *Gaddis v. Calgon Corp.*, 449 F.2d 1318 (5th Cir. 1971); *Am. Can Co. v. Crown Cork & Seal Co.*, 433 F. Supp. 333, 336 (E.D. Wis. 1977); *Ferguson v. Ford Motor Co.*, 77 F. Supp. 425, 436 (S.D.N.Y. 1948);

Google's "re-writing of the statute, plain on its face, is an example of lawmaking as distinguished from statutory interpretation that is beyond the power of the courts." *See Gaddis*, 449 F.2d at 1319 (reversing dismissal for improper venue where the defendant had a regular and established place of business in the district unrelated to the alleged infringement); *see also, e.g.*, *E.E.O.C. v. Abercrombie & Fitch Stores, Inc.*, 135 S. Ct. 2028, 2033 (2015) ("The problem with this approach is the one that inheres in most incorrect interpretations of statutes: It asks us to add words to the law to produce what is thought to be a desirable result. That is Congress's province.").

The district court properly followed the majority view—in fact, there is no longer a real dispute among the district courts on this issue—in refusing to read a nexus requirement into the statute.

CONCLUSION

"A mandamus from the blue without rationale is tantamount to an abdication of the very expository and supervisory functions of an appellate court." *Will*, 389 U.S. at 107. Google has adequate alternative relief, no right to a writ, and presents circumstances in which mandamus is unjustified. It thus seeks a "mandamus from

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Shelton v. Schwartz, 131 F.2d 805, 808–09 (7th Cir. 1942); *Bourns, Inc. v. Allen-Bradley Co.*, No. 70 C 1992, 1971 WL 17177, at *2 (N.D. Ill. Apr. 5, 1971); *see also* 60 Am. Jur. 2d Patents § 747 ("The regular and established place of business does not need to be a business connected to the alleged infringement.").

the blue without rationale." SEVEN respectfully asks the Court to deny that request.

Respectfully Submitted,

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SEVEN NETWORKS, LLC

Certificate of Service

True and correct copies of this Opposition to Petition for Writ of Mandamus were served on all counsel of record by the CM/ECF system on September 14, 2018.

/s/ J. Michael Heinlen
J. Michael Heinlen

Certificate of Compliance

This brief complies with the type-volume limitation of Fed. R. App. P. 21(d)(1) because it contains 7,723 words, excluding the parts of this brief exempted by Fed. R. App. P. 32(f) and Federal Circuit Rule 32(b).

This brief complies with the typeface and type-style requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in Equity Text A 14-point type for the text and Equity Text A 14-point type for the footnotes.

/s/ J. Michael Heinlen
J. Michael Heinlen

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No. _____

IN THE

United States Court of Appeals for the Federal Circuit

IN RE GOOGLE LLC,

Petitioner,

On Petition for a Writ of Mandamus to the
United States District Court for the Eastern District of Texas
Nos. 2:17-cv-00442
Judge Rodney Gilstrap

PETITION FOR A WRIT OF MANDAMUS

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August 20, 2018

CERTIFICATE OF INTEREST

Counsel for Petitioner Google LLC hereby certifies as follows:

1. The full name of every party represented by me is: **Google LLC.**

2. The real parties in interest are: **Google LLC.**

3. All parent corporations and any publicly held companies that own 10% or more of the stock of the parties I represent are as follows:

Google LLC is a wholly owned subsidiary of XXVI Holdings Inc., which is a wholly owned subsidiary of Alphabet Inc., a publicly traded company. (NASDAQ: GOOG, GOOGL). No publicly held company owns 10% or more of Alphabet Inc.'s stock.

4. The names of all law firms and the partners or associates that appeared for the parties now represented by me in the trial court or that are expected to appear in this court are:

Hogan Lovells US LLP: Neal Kumar Katyal, Colleen Roh Sinzdak, Thomas P. Schmidt, Sara Solow.

Quinn Emanuel Urquhart & Sullivan, LLP: Charles Kramer Verhoeven, Andrea Pallios Roberts, Brian E. Mack, Felipe Corredor, Jonathan Tse, Lance Lin Yang, Lindsay M. Cooper, Miles Davenport Freeman, Nithin Kumar, Patrick Curran, Sean S. Pak, Melissa Bailey, Gavin Snyder, Michael Yoo.

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Dated: August 20, 2018

/s/ Neal Kumar Katyal
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RELIEF SOUGHT

Petitioner Google LLC respectfully seeks a writ of mandamus directing the District Court for the Eastern District of Texas to dismiss or transfer the case to the Northern District of California due to improper venue, pursuant to 28 U.S.C. § 1406(a).

QUESTIONS PRESENTED

1. Whether a defendant who keeps computer equipment in the facility of a third party in a judicial district has a "regular and established place of business" in that district under the patent venue statute. 28 U.S.C. § 1400(b).

2. Whether an "act[] of infringement" must be related to a defendant's "regular and established place of business" in order to establish venue. *Id.*

3. Whether a defendant commits an "act[] of infringement" in a judicial district with respect to a method patent if it does not perform every step of the claimed method in the district. *Id.*

STATEMENT OF JURISDICTION

This Court has jurisdiction to grant mandamus relief under the All Writs Act, 28 U.S.C. § 1651. *See, e.g., In re Cray Inc.*, 871 F.3d 1355, 1356-58 (Fed. Cir. 2017).

INTRODUCTION

The Supreme Court's recent decision in *TC Heartland LLC* v. *Kraft Foods Group Brands LLC*, 137 S. Ct. 1514 (2017), corrected an overly broad reading of the patent venue statute that had taken the law far from what Congress intended. Undeterred, plaintiffs have sought to reestablish the prior regime by pushing for an overly-expansive interpretation of a different part of the venue statute, which permits venue "in the judicial district * * * where the defendant has committed acts of infringement and has a regular and established place of business." 28 U.S.C. § 1400(b).

In the decision below, plaintiff's efforts succeeded. The district court dramatically expanded the reach of Section 1400(b), holding that a company that merely provides computer equipment to a third party for use in that party's facility in a district has a "regular and established place of business" there. In particular, the district court found that Google LLC could be sued in the Eastern District of Texas because several third-party internet service providers (ISPs) in the District host a handful of Google-owned computer servers that help deliver certain in-demand content to the ISPs' subscribers. Google does not own, lease, possess, or control the space where the servers are kept; indeed, it has no access whatsoever to that physical space as long as the relationship with an ISP exists. Nonetheless, the district court split from its sister court to hold that a company has a "place of

business" anywhere its servers are stored. *Cf. Personal Audio, LLC* v. *Google, Inc.*, 280 F. Supp. 3d 922, 933-935 (E.D. Tex. 2017).

This Court should grant mandamus to correct that flawed and consequential holding. As a matter of both precedent and plain text, a "place of business" is (1) real property in which (2) some employee or other agent carries out the company's business. *In re Cray Inc.*, 871 F.3d 1355, 1362 (Fed. Cir. 2017). A computer stored in a third party's facility in a judicial district simply does not fit the bill. The district court found venue only by fracturing the statute into isolated words, stretching their meaning and ignoring context: It reasoned that a computer is a "place" because it "occup[ies] physical space"; that a computer is a place "of business" if it "service[s] a distinct business need," however small or unnecessary; and that the place of business is *Google*'s because Google owns the computer, even if it does not own, rent, or even have physical access to the space in which it is stored. Appx21, 28. That chain of reasoning exemplifies an observation of Judge Easterbrook: "Slicing a statute into phrases while ignoring their contexts * * * is a formula for disaster." *Herrmann* v. *Cencom Cable Assocs., Inc.*, 978 F.2d 978, 982 (7th Cir. 1992). The district court's rationale expands the venue provision beyond all recognition. To take just one example, a cable company that leases cable modems to its subscribers would presumably have a "regular and established place of business" in each of its subscriber's homes. That grasping

construction of Section 1400(b) defies its text and undermines the Supreme Court's enforcement of the venue provision in *TC Heartland*.

Moreover, the district court compounded its error by adopting an overbroad reading of what it means to commit an "act of infringement" in a judicial district. First, the court held that the "act of infringement" need not have any connection to the defendant's place of business in the district—improperly rendering the venue rule *broader* than the corresponding rule of specific personal jurisdiction. *Cf. Bristol-Myers Squibb Co.* v. *Superior Court of Cal.*, 137 S. Ct. 1773, 1780 (2017) (requiring a connection between the cause of action and a defendant's contacts with a forum for personal jurisdiction). Second, the court held there could be an "act of infringement" of a method patent in a district even if all the steps of the method were not actually performed there—contrary to this Court's clear guidance in *NTP, Inc.* v. *Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005).

The district court's impulse to update the venue statute for the digital age is understandable. The "world has changed" in the century-plus since Congress enacted the current patent venue law, particularly with the advent of computing. *Cray*, 871 F.3d at 1359. "But, notwithstanding these changes, in the wake of the Supreme Court's holding in *TC Heartland*, * * * [courts] must focus on the full and unchanged language of the statute." *Id*. And that language is "specific and unambiguous," and should not, "in the interest of some overriding policy, * * * be

given a liberal construction." *Schnell* v. *Peter Eckrich & Sons, Inc.*, 365 U.S. 260, 264 (1961) (internal quotation marks omitted). Because the district court flagrantly ignored that caution, this Court should do what it has already done several times in the past year alone: It should grant mandamus relief to restore the venue statute's meaning and vindicate the force of the binding precedent. *See, e.g.*, *In re BigCommerce, Inc.*, 890 F.3d 978, 981 (Fed. Cir. 2018); *In re ZTE (USA) Inc.*, 890 F.3d 1008 (Fed. Cir. 2018); *Cray*, 871 F.3d 1355; *In re Micron Tech., Inc.*, 875 F.3d 1091 (Fed. Cir. 2017); *In re Cutsforth, Inc.*, No. 2017-135, 2017 WL 5907556 (Fed. Cir. Nov. 15, 2017).

FACTS RELEVANT TO THE ISSUES PRESENTED

1. Google aims to deliver content to its users quickly and reliably, and has developed a network to achieve that goal. Appx209. The core of that network is Google's data centers, which provide computation and backend storage. Appx210. There are a handful of data centers in the United States; none is in Texas. The next layer of Google's network infrastructure is known as "Edge Points of Presence" ("PoPs"). Appx211. PoPs are where Google's network connects to the rest of the internet. Google has no PoPs in the Eastern District of Texas. *Id*.

The last pieces of the network are called "edge nodes," also referred to as "Google Global Cache" or "GGC" servers. Appx212-213. GGC servers are computers hosted in the facilities of a local ISP, almost always at the request of the

ISP. *Id.*; *see* Appx215-216. If an ISP chooses to host a GGC server, then a copy of certain portions of digital content that is popular with the ISP's subscribers—say, a popular YouTube video—can be temporarily "cached" on that GGC server. Appx212. As a result, an ISP does not need to fetch the content from outside its network and use up medium or longhaul capacity to do so.

GGC servers are off-the-shelf machines, made by third-party computer manufacturers. Appx196. If an ISP requests to participate in the GGC program, Google verifies that the ISP is eligible, and then the ISP and Google enter into a service agreement that defines each party's role. *See, e.g.*, Appx138-144. The computer manufacturer will ship the machines directly to the ISP. Appx196. The ISP unpacks and installs the server in its own facility, at which point digital content popular with the ISP's subscriber base loads onto the machine.

2. Google does not own or lease any real property in the Eastern District of Texas. Appx130. Google has no employees who work at any Google office in the District. Appx136. The only link that respondent SEVEN Networks, LLC has pointed to in connection with the present venue motion is the presence of several ISPs in the Eastern District of Texas that host GGC servers in their facilities. But Google has never seen the servers; no Google employee has ever visited the servers in the Eastern District; and Google does not even know precisely where the servers are installed. Appx153, 196. Indeed, Google does not have rights to

physically access the spaces in which the GGC servers are stored while the service agreements are in force. Appx139.

Moreover, the GGC servers in the District represent a "fraction of a fraction" of one percent of Google's total serving capacity in the United States. Appx196. If they were removed, there would be no noticeable effect on user experience. Appx149, 151-152.

3. Respondent sued Google for patent infringement in the Eastern District of Texas. The complaint alleges that various aspects of Google's mobile technology infringe respondent's patents. In particular, the complaint alleges that Google "has incorporated software technologies for conserving battery life" in its smartphones and mobile operating systems; that "Google's systems provide users with device-ready mobile applications, rather than require users to configure such applications"; and that Google also uses "2-Step Verification mechanisms to protect a user's personal information." Appx96. The complaint alleges that these features of Google's technology infringe ten of respondent's patents.

Google moved to dismiss under Federal Rule of Civil Procedure 12(b)(3) for improper venue or, in the alternative, to transfer the case to the Northern District of California under 28 U.S.C. § 1406(a).[1] The district court denied Google's motion.

[1] Google also moved to transfer the case to the Northern District of California under 28 U.S.C. § 1404 for reasons of convenience. The district court denied the motion on August 15, 2018. *See* Appx87 (ECF No. 280).

First, the court held that respondent had alleged that "acts of infringement were committed within this District" for every patent, rejecting Google's contention that respondent had not alleged acts of infringement with respect to the method claims because some steps of those claims were performed elsewhere. Appx11. The court also departed from prior decisions holding that it is necessary to plead a connection between a defendant's purported "place of business" in a district and the alleged "acts of infringement." Appx11-13.

The court then held that Google has "a regular and established place of business" in the Eastern District because of the GGC servers located at the ISPs in the District. Appx19 (internal quotation marks omitted). The court expressly "disagree[d]" with the "conclusion" of "its sister court"—which had found that Google had no place of business on the same underlying facts. *Id*. The court also acknowledged that "the rooms and buildings that house the GGC servers * * * may not, on their own, establish proper venue as to Google in this District." Appx40 (internal quotation marks omitted). But the court explained that "the 'place' of the 'place of business' is not the room or building of the ISP but rather Google's server and the space wherein it is located." *Id*.

The court thus denied Google's motion, and this petition followed.

REASONS THE WRIT SHOULD ISSUE

A writ of mandamus is appropriate when (1) the right to issuance of the writ is "clear and indisputable"; (2) the party seeking the writ has "no other adequate means to attain the relief he desires"; and (3) the writ is "appropriate under the circumstances." *Cheney* v. *U.S. Dist. Court for D.C.*, 542 U.S. 367, 380-381 (2004) (internal quotation marks and citations omitted). Additionally, "mandamus can be an appropriate means for the appellate court to correct a district court's answers to 'basic, undecided' legal questions," including "in the venue context." *Micron*, 875 F.3d at 1095 (quoting *Schlagenhauf* v. *Holder*, 379 U.S. 104, 110 (1964)). All these factors support mandamus.

I. THE RIGHT TO THE WRIT IS CLEAR AND INDISPUTABLE.

A. Google Does Not Have A Regular And Established Place Of Business In the Eastern District Of Texas.

"[T]he Plaintiff bears the burden of establishing proper venue." *ZTE*, 890 F.3d at 1013. The district court held that respondent had satisfied its burden of showing that Google has a "regular and established place of business" in the Eastern District because several ISPs—none of them Google entities—host a handful of GGC servers there. That finding is flatly inconsistent with the text of the law and with this Court's precedent. Mandamus is necessary to correct the district court's clear error.

1. Google Does Not Have A "Place Of Business" In The Eastern District Of Texas.

a. In order for venue to be proper in a patent infringement suit, the defendant must have a "regular and established place of business" in the relevant district. 28 U.S.C. § 1400(b). The phrase "place of business"—as a matter of precedent and as a matter of plain text—contains two different requirements. First, a place of business must be real property or must have the attributes of real property. As this Court has put it, "[t]he statute requires * * * '[a] building or a part of a building set apart for any purpose' or 'quarters of any kind' from which business is conducted." *Cray*, 871 F.3d at 1362 (quoting William Dwight Whitney, The Century Dictionary 732 (Benjamin E. Smith, ed. 1911)). That gloss on the meaning of the phrase accords with common dictionary definitions. The Oxford English Dictionary, for instance, defines "place of business" as "a place where business is conducted, spec[ifically] a shop, office, or other commercial establishment." Oxford English Dictionary (online ed. 2018). In short, a "place of business" must be real estate—a "building" or "quarters" where business is carried out. *Cray*, 871 F.3d at 1362.

Second, a "place of business" must be a place where either employees or other agents of the company are present to carry out the business. This, again, follows from the plain meaning of the phrase. A structure is only a "place of business" if business "is conducted" there. *Place of Business*, Oxford English

Dictionary. And, as a general matter, business is conducted *by people*. One does not typically refer to a computer as "conducting a company's business"; it is the human employees who do that. As Justice Holmes explained, the meaning of text is straightforward where the words "call[] up [a] popular picture." *McBoyle* v. *United States*, 283 U.S. 25, 26 (1931) (Holmes, J.). The phrase "place of business" calls up a "popular picture" of a company building where company employees are at work. *See CDX Diagnostic, Inc.* v. *U.S. Endoscopy Grp., Inc.*, No. 13-CV-5669(NSR), 2018 WL 2388534, at *3 (S.D.N.Y. May 24, 2018) (storage units were not a "place of business" under Section 1400(b) because "no 'employee or agent of [Defendant actually] conduct[s] business at' the storage units" (citation omitted)).

This interpretation is confirmed, beyond any doubt, by the patent service statute. The service statute and the venue statute were enacted side-by-side as a single provision on the same day. *See* 29 Stat. 695-696 (1897). Both are still on the books with non-substantive modifications (though they are now codified in separate sections). The service statute provides that "[i]n a patent infringement action commenced in a district where the defendant is not a resident but has a regular and established place of business, service of process, summons or subpoena upon such defendant *may be made upon his agent or agents conducting such business*." 28 U.S.C. § 1694 (emphasis added). "In other words, § 1694 presumes

that a defendant with a 'place of business' in a district will also have 'agents conducting such business' in that district." *Peerless Network, Inc.* v. *Blitz Telecom Consulting, LLC*, No. 17-CV-1725 (JPO), 2018 WL 1478047, at *4 (S.D.N.Y. Mar. 26, 2018).

Section 1694 thus definitively clears up any ambiguity about Section 1400(b): When Congress used the phrase "place of business," it understood that term to mean a place with "agents" of the defendant "conducting * * * business." 28 U.S.C. § 1694; *see Dep't of Revenue of Ore.* v. *ACF Indus., Inc.*, 510 U.S. 332, 342 (1994) ("identical words used in different parts of the same act are intended to have the same meaning" (internal quotation marks and citations omitted)). The district court was simply wrong to reject this reading as "extra-statutory." Appx35. The interpretation flows ineluctably from the text of the service statute, which was directly adjacent to the venue section when passed and uses the precise phrase in question.

Moreover, reading "place of business" in Section 1400(b) to require real property in which employees conduct business is consistent with the statute's purpose and legislative history. As this Court has explained, the venue "statute's 'main purpose' was to 'give original jurisdiction to the court where a permanent agency transacting the business is located.'" *Cray*, 871 F.3d at 1361 (quoting 29 Cong. Rec. 1900 (1897) (statement of Rep. Lacey)). And the examples of

permanent business locations discussed in the legislative history shed light on what Congress had in mind as a "place of business": a "manufactory," or an "office where the goods are sold." 29 Cong. Rec. 1900 (1897) (statement of Rep. Lacey). Those examples confirm the need for real property, and for employees conducting the "business" from such locations.

b. With these principles in mind, it is clear that Google does not have a "place of business" in the Eastern District. Google does not own, rent, or lease any real property there. Appx130. And while several ISPs in the District host GGC servers, even the district court recognized that the "room or building of the ISP" does *not* belong to Google. Appx40. Nor does Google lease that building or any space in it; the agreement through which Google contracts with ISPs to maintain GGC servers in the District is called a "*Service* Agreement," not a "lease." Appx138 (emphasis added). In that document, the ISPs agree to provide "[r]ack space, power, network interfaces, and IP addresses" to the GGC servers, as well as "[r]emote assistance and installation services." *Id*. The contract therefore deals primarily with the provision of services by the ISP, not real estate, and it gives Google no control over any physical space. Indeed, the agreement expressly puts the *ISP* in control of "physical access" to the equipment. Appx139. The only time at which it authorizes Google employees to enter the premises where the GGC

servers are located is if the agreement is terminated and the ISPs do not return the machines. *See id.*

Further, Google has no employees who work at any Google office in the District. Appx136. The uncontroverted evidence is that no agent or employee of Google has *ever* visited the GGC servers located in the District, and Google employees certainly do not work from the "rack spaces" (*i.e.*, shelves) where the servers are connected to the ISP's network. Appx196. In these circumstances, it is clear that Google does not have a "place of business" in the District.

c. The district court concluded otherwise, finding that the GGC servers qualify as "places," and therefore satisfy the statute. That finding does violence to the statutory text and basic English usage. The "place of business," as this Court has explained, refers to a "building" or "quarters." *Cray*, 871 F.3d at 1362 (internal quotation marks omitted). It does not include a physical object simply because it occupies physical space. Indeed, the Court's reading might turn any company desktop computer—or even a piece of property rented from a company to a customer—into a place of business, an absurd outcome at odds with the plain meaning. *See Automated Packaging Sys., Inc.* v. *Free-Flow Packaging Int'l, Inc.*, No. 5:14-cv-2022, 2018 WL 400326, at *9 (N.D. Ohio Jan. 12, 2018) ("machines at the customer's locations within th[e] district" supplied by the defendant for their customers were not places of business of the defendant); *HomeBingo Network, Inc.*

v. *Chayevsky*, 428 F. Supp. 2d 1232, 1250 (S.D. Ala. 2006) ("That an individual may be a part owner of a piece of equipment (in this case, a slot machine) located in a judicial district does not render the situs of that equipment his regular and established place of business for venue purposes.").

The district court also ruled that the "rack space" which holds a server could be a "place" under the statute. Appx40. But, as one court has put it, "whatever a 'place of business' is, it is not a shelf." *Peerless Network*, 2018 WL 1478047, at *4-5. Once again, any physical object occupies some physical space, and to hold that such space qualifies as a "place of business" would eviscerate the statutory limits on venue. Companies would potentially become subject to venue in any judicial district in the United States in which a physical object belonging to the company—a computer, cell phone tower, piece of railroad track, perhaps even a mailbox—was located. *See Personal Audio*, 280 F. Supp. 3d at 934. Indeed, under the district court's rule, *Cray* (which held that an employee's home office was not a defendant's place of business) might have come out differently if the employee happened to use a company-owned computer at home. After all, that computer takes up some physical desk or shelf space.

d. The district court likened the GGC servers to a warehouse, Appx30-34, but the analogy boomerangs. A warehouse has both of the necessary characteristics of a "place of business"—it is real property, and it is staffed by

actual employees of the business. The GGC servers and their rack space differ from warehouses on both metrics. Moreover, there are other physical analogies which are closer (though by no means identical): GGC servers, which temporarily store or "cache" popular content for users, are, if anything, more like discrete storage lockers than warehouses. But courts have found storage lockers do *not* qualify as places of business for purposes of the venue statute. *See Regents of Univ. of Minn.* v. *Gilead Scis., Inc.*, 299 F. Supp. 3d 1034, 1043 (D. Minn. 2017) ("The Court is not persuaded that these relatively small storage lockers * * * constitute a sufficiently regular and established physical foothold of Gilead in Minnesota"); *CDX Diagnostic*, 2018 WL 2388534, at *3 (same). And even that analogy is strained, because the racks holding the GGC servers are neither rented nor physically visited by Google—as storage lockers would be—but are under the control of the third-party ISPs.[2]

[2] The district court also thought that Section 18(c) of the America Invents Act—which provides that an ATM machine "shall not be deemed to be a regular and established place of business" for venue purposes in a case alleging infringement of a business method patent—implied that an ATM machine would otherwise be sufficient for venue. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(c), 125 Stat. 329, 331 (2011). But there is no indication—in the text of the statute, the legislative history, or otherwise—that Congress meant to change the law by this provision. If anything, Congress sought only to clarify that ATM machines are not, in fact, covered under the venue statute. There are "many examples of Congress legislating in that hyper-vigilant way, to 'remov[e] any doubt' as to things not particularly doubtful in the first instance." *Cyan, Inc.* v. *Beaver Cty. Emps. Ret. Fund*, 138 S. Ct. 1061, 1074 (2018) (quoting *Marx* v. *Gen. Revenue Corp.*, 568 U.S. 371, 383-384 (2013)).

2. Any Place Of Business In The District Is Not Regular And Established.

Furthermore, the district court wrongly concluded that GGC servers meet the requirement of a "regular and established" place of business. 28 U.S.C. § 1400(b). As this Court explained in *Cray*, the place in question must be "'settle[d] certainly, or fix[ed] permanently.'" *Cray*, 871 F.3d at 1363 (quoting Black's Law Dictionary (1st ed. 1891)). Here, the ISPs host the servers in question pursuant to a contract that permits the ISPs to move the servers to different locations without terminating the agreement. *See* Appx139. Beyond that, the contract also can be terminated "at any time" for the "convenience" of either party. Appx138. The storage of personal property on the shelf of a third party pursuant to an agreement that can be terminated at any time for any reason is simply not enough to establish that Google's "place" in the Eastern District is "fix[ed] permanently." *Cray*, 871 F.3d at 1363. And the very use of the phrase "regular and established" reinforces that the focus of the venue provision is *real*, as opposed to personal, property. A building can be regular and established; it verges on gibberish to apply that phrase to, say, a car or a computer.

3. Any Place Of Business Is Not Google's.

Finally, the putative "place of business" is not "of the defendant" because it is not Google's. *Id.* at 1360. The "*defendant* must establish or ratify the place of business" in question. *Id*. at 1363 (emphasis added). "Relevant considerations

include whether the defendant owns or leases the place, or exercises other attributes of possession or control over the place." *Id*. Here, while Google retains ownership of the computers in question, it is the ISPs that install, store, and maintain them. Indeed, generally no Google employee even sees the GGC servers; they are shipped by a third-party computer manufacturer straight to the ISP, who sets them up, determines where they will be placed, and then supplies "power, network interfaces, and IP addresses." Appx138. Thus, notwithstanding Google's technical ownership of the computers, the ISP "exercises" significant "attributes of possession or control" over them. *Cray*, 871 F.3d at 1363.

Nor does Google own or lease the "rack space" within facilities of the ISPs where the servers are stored. Appx40. The relevant agreements say only that an ISP will "provide" "rack space" for the equipment. Appx138. That rack space, in turn, is expressly located "in *the Host*'s collocation facilities"—physical property locations owned or rented by the ISP. *Id.* (emphasis added). For an ISP merely to provide rack space for equipment—at a place of the ISP's choosing—does not in any meaningful sense give Google a "lease" or control over the space on which the servers sit. To return to a prior analogy, if an employee works at home on a company-owned computer, the company does not "lease" the desk space on which the computer sits.

Moreover, Google does not even have physical access to the rooms holding the servers and their racks. The racks are in the host's facilities, and Google does not have a key. Appx139 ("The *Host* will be responsible for * * * physical access to the Equipment." (emphasis added)). The contract only grants Google access *if* the agreement is terminated and *if* the ISP refuses to surrender the equipment back to Google. Then, and only then, may Google "enter any premises of Host where such equipment is located during normal working hours" in order to get it back. *Id.* That is a far cry from a "lease," and certainly does not convert the *ISP*'s place of business to *Google*'s for venue purposes.

This Court has also noted that "[p]otentially relevant inquiries" in determining whether a location is a "place of business" of the defendant "include whether the defendant lists the alleged place of business on a website, or in a telephone or other directory; or places its name on a sign associated with or on the building itself." *Cray*, 871 F.3d at 1363-64. Google has done none of that. There is no Google "sign" or other indication on any building containing GGC servers that the building is a place of business of Google. While Google has a map that indicates—on a metro- and not location-specific level—where GGC servers are deployed around the world, *see* Appx213, that map charts the approximate location of many pieces of the worldwide infrastructure that delivers content to Google users. It does *not* show that Google is representing it has a "place of business"

everywhere its equipment is located. *See Cray*, 871 F.3d at 1363 (stating that the relevant question is whether the defendant has "represent[ed] that it has *a place of business* in the district," not just equipment (emphasis added)). Most of the "dots" on the map are merely based on the airport nearest to the location of the ISP hosting the servers; they do not purport to represent that Google has a place of business in any particular precise location. Appx155, 218.

"A further consideration" in assessing whether something qualifies as a "place of business" of a defendant "might be the nature and activity of the alleged place of business * * * *in comparison with* that of other places of business of the defendant in other venues." *Cray*, 871 F.3d at 1364. The GGC servers in the Eastern District of Texas are a "fraction of a fraction" of one percent of the total serving capacity of Google's peering and GGC server network. Appx196. Removing the GGC servers in the District would have no impact on Google's ability to deliver traffic. Appx149, 151-152. And Google does not have a regular office or even a data center in the District. In comparison with Google activities in other locations, then, Google's activity in the Eastern District of Texas is negligible. That militates against a finding that Google somehow maintains a "place of business" there.

* * *

In short, to call a physical object—or the shelf or desk on which it sits—a qualifying "place of business" is to rupture the venue statute and sever it from its meaning and purposes. That violates the "fundamental principle of statutory construction (and, indeed, of language itself) that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used." *Deal* v. *United States*, 508 U.S. 129, 132 (1993). Here, the bottom line is that Google has no real property in the District, and no offices in which its employees or agents regularly conduct business. It therefore has no "regular and established place of business" under the statute, and venue is improper.

B. The Alleged Acts Of Infringement Must Be Related To The Defendant's Place Of Business To Support Venue.

The district court committed a second clear error that justifies mandamus relief: Section 1400(b) states that venue is proper only where "the defendant has committed acts of infringement *and* has a regular and established place of business." 28 U.S.C. § 1400(b) (emphasis added). Despite the statutory linkage of these two requirements, the district court held that a plaintiff may meet the venue requirement by pointing to alleged "acts of infringement" that are completely unrelated to the defendant's "place of business." Appx12-14. That is contrary to the plain text, which conjoins the two requirements by placing them side by side in a single phrase; and it is contrary to the legislative history which states that the two requirements must "concur." *See* 29 Cong. Rec. 1901 (1897). Further, the district

court's reading is at odds with the statute's purpose and this Court's precedent, both of which establish that the statute imposes more stringent requirements than the standards for establishing personal jurisdiction. *Cray*, 871 F.3d at 1361. If the alleged "acts of infringement" may be unrelated to the defendant's place of business, then the personal jurisdiction standard would be *more* demanding than the special venue statute. *Cf. Bristol-Myers*, 137 S. Ct. 1773.

In *Schnell*, the Supreme Court explained that Congress adopted Section 1400(b)'s precursor in order "to eliminate the 'abuses engendered' by previous venue provisions allowing [patent] suits to be brought in any district in which the defendant could be served." 365 U.S. at 262. Accordingly, in *Cray*, this Court concluded that Section 1400(b) "clearly narrows jurisdiction relative to the courts that previously allowed patent suits wherever" a plaintiff could establish personal jurisdiction over a defendant. 871 F.3d at 1361. And it further observed that Section 1400(b)'s "place of business standard requires more than the minimum contacts necessary for establishing personal jurisdiction." *Id.* (internal quotation marks omitted).

The district court disregarded that precedent when it held that Google's place of business did not need to be "tied to or related to" the alleged acts of infringement. Appx14. The Supreme Court has recently reiterated that personal jurisdiction *may not* be established based on minimum contacts with a forum that

are unrelated to the actions that give rise to the suit. *Bristol-Myers*, 137 S. Ct. at 1780 ("the suit must arise out of or relate to the defendant's contacts with the forum" (internal quotation marks and brackets omitted)). Indeed, *Bristol-Myers* held that if there is no connection between the contacts and the underlying controversy, "specific jurisdiction is lacking regardless of the extent of a defendant's unconnected activities in the State." *Id.* at 1781.

If a plaintiff cannot establish personal jurisdiction through reliance on minimum contacts that are unrelated to the underlying suit, then the plaintiff certainly cannot satisfy the stricter venue statute by alleging that the defendant has a "place of business" in the district that is unrelated to the alleged "acts of infringement." Indeed, even before *Bristol-Myers*, multiple courts had held that under the special venue statute, an "office of the defendant in [a] judicial district, which * * * has absolutely nothing to do with the" alleged infringement does not allow for venue. *Scaramucci* v. *FMC Corp.*, 258 F. Supp. 598, 602 (W.D. Okla. 1966); *see also Jeffrey Galion, Inc.* v. *Joy Mfg. Co.*, 323 F. Supp. 261, 266-267 (N.D. W. Va. 1971) (same). The district court clearly erred in reaching a contrary conclusion.

C. There Is No "Act Of Infringement" Of A Method Claim When Only Some Steps Of The Method Are Performed In The District.

The district court's venue holding was erroneous for another reason: The district court concluded that, under Section 1400(b), an "act[] of infringement" of a

method patent claim occurs in a place where only *some* of the steps of the claimed method are performed. Appx9-11. That is directly contrary to this Court's holding that a method claim is infringed only in a location where *all* of the steps of the method are carried out. *NTP*, 418 F.3d 1282.

In *NTP*, this Court examined the question of where "'an offending act [of infringement] is committed'" when a patent claims a multi-step method. *Id.* at 1316 (quoting *N. Am. Philips Corp.* v. *Am. Vending Sales, Inc.*, 35 F.3d 1576, 1579 (Fed. Cir. 1994)). After conducting a detailed analysis of the nature of method patents and the statutory predicates for patent infringement, the *NTP* Court decided that a "patent for a method or process is not infringed" in a particular location "unless all steps or stages of the claimed process" are performed in that place. *Id.* at 1318 (internal quotation marks omitted). Thus, neither direct nor "induced or contributory infringement" of a method claim occurs in a location "unless each of the steps is performed" in that place. *Id.*; *see also Cardiac Pacemakers, Inc.* v. *St. Jude Med., Inc.*, 576 F.3d 1348, 1365 (Fed. Cir. 2009) (finding a method claim was not infringed under Section 271 in part because the plaintiff "d[id] not allege that all of those steps are carried out in the United States"); *Isis Pharm., Inc.* v. *Santaris Pharma A/S Corp.*, No. 3:11-cv-2214-GPC-KSC, 2014 WL 2531973, at *4 (S.D. Cal. 2014) (dismissing a claim for method infringement when "the steps of Isis's claimed methods [we]re performed without the United States," even though the

sale of "services" to perform the claimed method occurred within the United States).

Here, the district court rejected that holding. It found that respondent had satisfactorily alleged that "acts of infringement" of the method claims associated with three of the patents-in-suit occurred in the Eastern District, despite respondent's concession that only *some* of the steps of the claimed methods allegedly occurred there. Appx9-11; Pl.'s D. Ct. Resp. Br. at 24-29. The district court rested this conclusion primarily on an erroneous reading of an unpublished Delaware District Court case, *Blackbird Tech. LLC* v. *Cloudfare, Inc.*, No. 17-283, 2017 WL 4543783 (D. Del. Oct. 11, 2017). According to the district court, the plaintiffs in *Blackbird* were found to have alleged "acts of infringement" of a method claim in California even though some steps of the claimed method were performed elsewhere. Appx9-10. But the *Blackbird* court reached no such conclusion. To the contrary, it recognized that "a method claim is infringed within a district only if the whole system is put into service there." *Blackbird*, 2017 WL 4543783, at *4 (citing *NTP*, 418 F.3d at 1318). *Blackbird* found that alleged acts of patent infringement had occurred in California only because the patent at stake in that case covered both method *and* apparatus claims, with the latter sufficient to provide venue. *Id.*

Blackbird simply does not stand for the proposition that respondent may establish that an act of infringement of the method claims occurred within the Eastern District, despite respondent's acknowledgement that some steps occurred elsewhere. And the district court could not have relied on *Blackbird*'s actual reasoning because for at least one of the patents-in-suit the *only* claim involved is a method claim. *See* Appx97 (alleging only a violation of method claim 10 of the '158 Patent).

Respondent asserts infringement of both a method and a system claim for at least one of the patents-in-suit (the '433 patent). But respondent failed to allege an act of infringement of the entire system claim within the Eastern District. The district court refused to consider Google's argument on that score, holding that at a minimum it could exercise pendent jurisdiction. Appx14-15 n.18. But *TC Heartland* reaffirmed in unequivocal terms that Section 1400(b) is the "*sole and exclusive* provision controlling venue in patent infringement actions." 137 S. Ct. at 1519 (emphasis added and internal quotation marks omitted). Courts cannot override that principle with some nebulous concept of pendent venue. *See Datascope Corp.* v. *SMEC, Inc.*, 561 F. Supp. 787, 789 (D.N.J. 1983) ("[I]n a patent-infringement action the plaintiff must establish proper venue as to each patent allegedly infringed.").

The district court's only other justification for ignoring *NTP*'s holding was its concern that adhering to *NTP* would mean that some plaintiffs will be required to bring suit exclusively in a defendant's home district because the plaintiffs will not be able to allege that an act of method patent infringement occurred in any particular district. Appx10 n.13. But that possibility is simply what the venue statute demands by permitting venue only where an "act of infringement" occurs. Venue analysis "must be closely tied to the language of the statute"; courts may not loosen the requirements to address their own policy concerns. *Cray*, 871 F.3d at 1362; *see also Schnell*, 365 U.S. at 264.

II. PETITIONER HAS NO OTHER ADEQUATE MEANS OF RELIEF AND MANDAMUS IS WARRANTED IN ANY EVENT.

A mandamus petitioner generally must also demonstrate that he has "no other adequate means to attain the relief" desired. *Cheney*, 542 U.S. at 380-381 (internal quotation marks omitted). Google has "no other adequate means to obtain the relief [it] desires" because the remedy Google seeks—being spared the burden of having to litigate in a forum that is improper under federal law—cannot be secured on appeal. *See, e.g.*, *Mallard* v. *U.S. Dist. Ct. for S. Dist. of Iowa*, 490 U.S. 296, 299, 309-310 (1989) (mandamus warranted to review trial court order appointing counsel given the unavailability of an "alternative remedy"); *In re Queen's Univ. at Kingston*, 820 F.3d 1287, 1291 (Fed. Cir. 2016).

In any event, the district court here made *three* glaring and systemically important legal errors. And this Court has made clear that mandamus is warranted where "the district court misunderstood the scope and effect" of this Court's precedents on venue, and intervention is necessary to provide prompt guidance to lower courts overseeing patent cases. *Cray*, 871 F.3d at 1359. This proposition is not controversial: It has become "well established that mandamus is available to contest a patently erroneous error in an order denying transfer of venue." *In re EMC Corp.*, 677 F.3d 1351, 1354 (Fed. Cir. 2012). And this Court has routinely used its mandamus authority to review district court decisions denying motions to transfer on account of venue under Section 1406. *See BigCommerce*, 890 F.3d at 981; *ZTE*, 890 F.3d at 1008; *Cray*, 871 F.3d at 1357; *Micron*, 875 F.3d 1091; *Cutsforth*, 2017 WL 5907556. The Court should exercise the same power here.

This Court recently denied a petition for mandamus in a case raising a venue issue under Section 1406. *See In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018). But that case was brought by a foreign corporation and turned on the meaning of a different venue statute—28 U.S.C. § 1391(d)—which applies to aliens. It also did not involve a "clear and indisputable" right to the writ, and did not present an important and unsettled question of law on which the lower courts had split. *See HTC*, 889 F.3d at 1354, 1356, 1359-60. To the contrary, while the "[p]etitioner attempt[ed] to characterize th[e] legal issue as 'unsettled' and resulting in

'inconsistent' holdings, [p]etitioner [did] not cite a single case that ha[d] adopted its interpretation." *Id.* at 1361. There was thus not the same compelling need for this Court's guidance.

Indeed, *HTC* expressly recognized that "there may be circumstances in which" anything other than mandamus review "is inadequate." *Id*. at 1354. And in two cases decided after *HTC*—both of which also involved Section 1406 rulings—this Court found those special "circumstances" warranting mandamus to be present where this Court's intervention was needed "to decide 'basic' and 'undecided' questions" regarding venue. *BigCommerce*, 890 F.3d at 981 (quoting *Schlagenhauf*, 379 U.S. at 110); *see also ZTE*, 890 F.3d at 1011 ("This case presents two such 'basic' and 'undecided' issues relating to proper judicial administration" likely to be repeated, and therefore "present[s] sufficiently exceptional circumstances as to be amenable to resolution via mandamus").

Like *BigCommerce* and *ZTE*, the questions presented by this petition are "'basic,' and will invariably be repeated." *BigCommerce*, 890 F.3d at 981. "[D]ifferent district courts have come to different conclusions about" the answers. *Id*. The questions thus "warrant * * * immediate consideration via mandamus." *Id*.

III. MANDAMUS IS APPROPRIATE TO PROVIDE GUIDANCE TO THE LOWER COURTS ON UNSETTLED AND IMPORTANT VENUE QUESTIONS.

Mandamus is also "appropriate under the circumstances." *Cheney*, 542 U.S. at 381. Both this Court and the Supreme Court have held that mandamus is appropriate where a petition presents a "basic, undecided question" of law on a "substantial" issue, *Schlagenhauf*, 379 U.S. at 110, and where "deciding th[e] matter now * * * [is] important to 'proper judicial administration.'" *In re BP Lubricants USA Inc.*, 637 F.3d 1307, 1313 (Fed. Cir. 2011) (quoting *LaBuy* v. *Howes Leather Co.*, 352 U.S. 249, 259-260 (1957)). As noted, this is such a case: The questions decided by the district court are vitally important, recurring, and have split the lower courts—indeed, there is a split in the Eastern District of Texas itself. Further, resolving these threshold questions now is "important to 'proper judicial administration'" because it will ensure that patent suits are tried in appropriate forums, and that district court judges do not overstep proper lines of authority. *See id.* (citation omitted).

The questions addressed by the district court's ruling have become increasingly important after *TC Heartland*. In that case, the Supreme Court held that the phrase "judicial district where the defendant resides" in the patent venue statute means only the defendant's State of incorporation. 137 S. Ct. at 1516-17. The decision is a powerful reminder that courts should police venue to ensure that

patent suits are heard only in the fora Congress intended. And yet the plaintiffs here are essentially asking lower courts to restore the pre-*TC Heartland* regime through a back door.

This Court has repeatedly found that it is appropriate to grant mandamus relief to prevent such circumvention of Supreme Court precedent. In four recent cases, it has considered whether a district court has correctly interpreted the text or application of the second prong of Section 1400(b). *See ZTE*, 890 F.3d at 1008; *Cray*, 871 F.3d at 1355; *Micron*, 875 F.3d 1091; *Cutsforth*, 2017 WL 5907556. It should do the same here.

That is all the more true because lower courts have confronted and splintered on the specific questions presented here. Two courts in the Eastern District have already reached opposite holdings on whether a computer—and specifically, whether a GGC server—is a "regular and established place of business." *Compare* Appx15-39, *with Personal Audio*, 280 F. Supp. 3d at 933-935. Other courts have weighed in on whether telecommunications equipment or storage units more generally can qualify, and have reached holdings at odds with the court's decision below. *See Peerless Network*, 2018 WL 1478047, at *3-5 ("a shelf containing a piece of [the defendant's] telecommunications equipment" in the district was not a regular and established place of business); *CDX Diagnostic*, 2018 WL 2388534, at *3 (storage units in the district were not sufficient); Memorandum Opinion &

Order at 4, *BMC Software, Inc.* v. *Cherwell Software, LLC*, No. 1:17-cv-01074-LO-TCB (E.D. Va. Dec. 21, 2017), ECF No. 55 (rental of a computer server in the district was not a regular and established place of business).

Courts have similarly splintered on what it means to commit an "act of infringement" in a district. *Compare Scaramucci*, 258 F. Supp. at 601 (insisting on a nexus with the "place of business" requirement), *with Plexxikon Inc.* v. *Novartis Pharm. Corp.*, No. 17-cv-04405-HSG, 2017 WL 6389674, at *1 (N.D. Cal. Dec. 7, 2017) (rejecting the need for a nexus). And they have disagreed on whether a method claim is infringed in a district when some of the steps of the method are performed elsewhere. *Compare* Appx9-11, *with Blackbird*, 2017 WL 4543783, at *4 ("a method claim is infringed within a district only if the whole system is put into service there").

The issues presented by this petition have not been squarely "addressed [in prior cases]" of this Court, but they "will inevitably be repeated" and already, "district courts have come to different conclusions about" them. *BigCommerce*, 890 F.3d at 981. As it has done in the past, this Court should use its mandamus power to resolve the confusion in the lower courts on these important questions.

CONCLUSION

For the foregoing reasons, Google respectfully requests that this Court issue a writ of mandamus directing the Eastern District of Texas to dismiss or transfer this case for lack of proper venue.

Respectfully submitted,

/s/ Neal Kumar Katyal

August 20, 2018

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1. This petition complies with the type-volume limitations of Federal Rules of Appellate Procedure 21(d)(1) because it contains 7,746 words.

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the typestyle requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Office Word in Times New Roman 14-point font.

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/s/ Neal Kumar Katyal

The world's first humanless warehouse is run only by robots and is a model for the future

At a recent technology show in Tokyo, a large robot arm reached into a full-sized mockup of a shipping container and began unloading boxes from it. Set on a platform that moved back and forth, the robot was doing a job usually carried out by warehouse workers and forklift operators. The goal of the company that's developing it, Mujin, is total automation.

The system, still a prototype, doesn't work perfectly — it accidentally damaged a box during the demo — but it's going to be trialed in warehouses in Japan this year.

"Lifting heavy boxes is probably the most backbreaking task in warehouse logistics," said Mujin's American co-founder and CTO, Rosen Diankov. "A lot of companies are looking for truck unloading systems, and I believe we're the closest to commercialization."

More from At Work:

This start-up created the first US farm run by robots

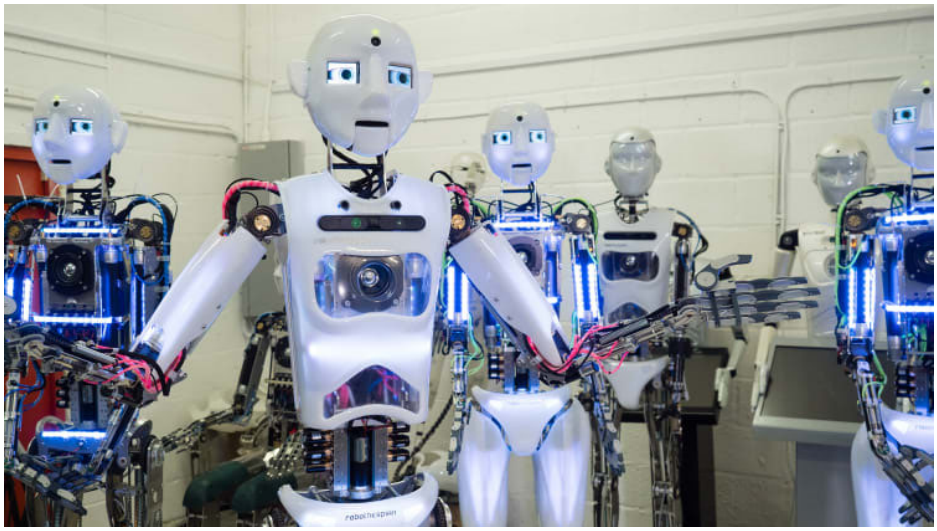
How AI is changing the way you apply for jobs

The Tokyo-based start-up is aiming to be a leader in automating logistics processes. To do that, it's building robot controllers and camera systems and integrating them with existing industrial robot arms. The key product here is the controllers — each about the size of a briefcase, one for motion planning and one for vision — that act as an operating system that can control the hardware from any robot manufacturer. If a goal such as grasping an object is input, the controllers automatically can

generate motions for robots, eliminating the traditional need to “teach” robots manually. The result, according to the company, is higher productivity for users.

Simply put, the technology — based on motion planning and computer vision — makes industrial robots capable of autonomous and intelligent action.

Mujin turned heads when it showed off its transformation of a warehouse operated by Chinese e-commerce giant JD.com. The 40,000-sq-m facility in Shanghai began full operations in June. It was equipped with 20 industrial robots that pick, transfer and pack packages using crates on conveyor belts, as well as camera systems and Mujin robot controllers. Other robots carted merchandise around to loading docks and trucks.



See The Full Clip

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Amazon also has invested heavily in automating its fulfillment centers, buying Mass.-based robot company Kiva Systems for $775 million in 2012, but JD.com called its facility the world’s first fully automated e-commerce warehouse. Instead of the usual 400 to 500 workers needed to run a warehouse that size, it needs only five. And their job is only to service the machines, not run operations.

Standardizing total automation

“My goal is to automate warehouses in America and make a lot of success stories there,” said Diankov. “But will people value that, and are there enough people with expertise to do it? That’s why we started in Japan.”

Mujin’s plan is to move away from customization for every client and standardize a complete automation package.

"Unfortunately, just having a robot system work perfectly is not enough, and we need to have the equipment and system around the robot to finally allow it to contribute to the operations of the business," said Diankov. "Once there are enough solid standardized components for warehouse automation, we can focus our energies to quickly deploy and perfect them."

Born in Bulgaria, Diankov moved to the United States at age 10 and studied robot engineering at Carnegie Mellon University, where he earned a Ph.D. After stints at seminal California robotics start-up Willow Garage and the University of Tokyo's JSK Robotics Lab, he founded Mujin in 2011 with CEO Issei Takino.

Staffed by about 70 people, including many non-Japanese, the start-up is headquartered in a working class district on the eastern side of Tokyo. While preaching the value of automation at trade shows, the company reminds people that the number of workers in Japan is dropping by 2,125 per day, due to the country's low birthrate and aging population.

"In the U.S., robot technology is often undervalued and directly compared to the value of human workers," said Diankov. "If you're going to be competing with that from day one, maybe you have no room to grow quickly. In Japan they have a mindset that values robotics much more, even if it sometimes doesn't make economic sense. They're willing to jump into investments into robotics."

Diankov believes fears of robots taking jobs from people don't reflect the reality of the workplace.

Rosen Diankov, cofounder and CTO of Mujin, sees a world where warehouses are totally automated and run by robots..
Source: Mujin

"Introducing robots creates more jobs, and history has shown that's been the case," he said. "Companies that have embraced automation, like Toyota — it's the biggest car company in the world now."

No fuzzy logic

Mujin is building smart machines based on model-based approaches to robotics. Unlike applications in the current fad for deep learning, Mujin's controllers are not learning to accomplish a task through trial and error. There's no guesswork involved. They're programmed to do a specific task very well, and every position of every joint of a Mujin robot is tracked, down to the millisecond. While that lowers the possibility for error, it also imposes a massive computational burden on the controllers, so they're equipped with fast microchips that can evaluate tens of thousands of possible moves, choosing the best one in less than a second.

See The Full Clip

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"The approach is like that of a train, plane or rocket — you don't want it to be self-learning, just predictable when it goes from A to B," said Diankov. "That's how you create innovation, with perfectly predictable systems. That's what we're trying to do with robotics. I like to call this machine intelligence, not artificial intelligence."

Rosen said Mujin is probably the only robotics start-up doing this advanced robotics stuff that's not working at a loss. The company has raised $7 million in VC funding from Tokyo venture capital firms JAFCO and the University of Tokyo Edge Capital. It's also earning revenue from projects for Japanese firms, such as Askul, which specializes in e-commerce for office supplies, and Paltac, a logistics firm, as well as JD.com in China.

In the U.S., robot technology is often undervalued and directly compared to the value of human workers.
Rosen Diankov
co-founder and CTO, Mujin

Mujin also has managed to penetrate Japan's conservative $1.4 billion robot manufacturing industry, dominated by global players like Fanuc and Yaskawa Electric. It's persuaded robot makers to loosen their tight grip on their confidential software so that Mujin controllers can directly run robot servo-motors. Now the start-up wants to scale as quickly as possible and expand into the United States.

"End customers are choosing Mujin first before they choose the robots," said Takino, who met Diankov when he was a salesman with Iscar, an Israeli machine tool company owned by Berkshire Hathaway. "We are robot controller makers, which is like Windows for industrial robots. Windows was popular for the killer application it introduced — browsing the internet. We want to make killer apps like bin picking as easy as possible."

"We're at the cusp where all these different automation technologies — including robot hardware, sensing hardware, AI algorithms, conveyor systems and sorting systems — coming together," said Diankov. "Five years ago it was not possible, because there were too many unknowns. But today there's a solution for each of these different components in the warehouse. And now it's a race to see which company puts all the components together the fastest and has the end result. There are several choices for each component, and the jury's still out on what a completely automated warehouse will look like."

WATCH: Ford is using bionic suits to help employees work safer

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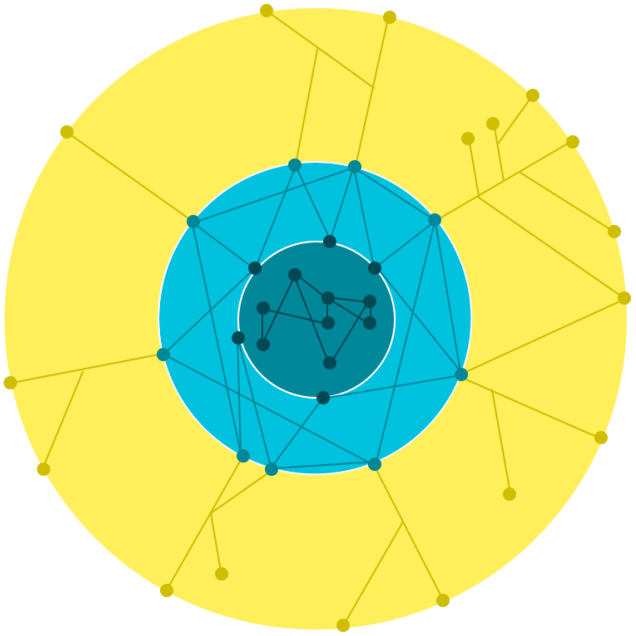
Exhibit M



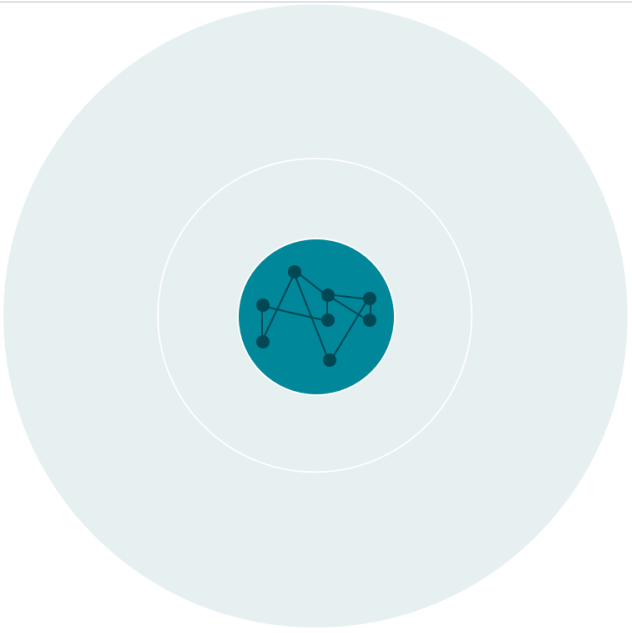
Google aims to deliver its services with high performance, high reliability, and low latency for users, in a manner that respects open internet principles.

We have invested in network infrastructure that is aligned with this goal and that also allows us to work with network operators to exchange traffic efficiently and cost-effectively.

Google's network infrastructure has three distinct elements:

- Core data centers
- Edge Points of Presence (PoPs)
- Edge caching and services nodes (Google Global Cache, or GGC)

Data Centers



Data centers

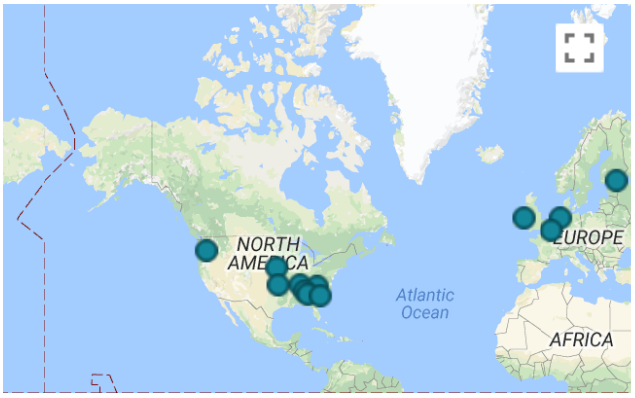
Google operates data centers that we use for computation and backend storage. We have data centers in the Americas, Europe and Asia.

Our data centers are the heart of Google content and services.

Google has built a large, specialized data network to link all of its data centers together so that content can be replicated across multiple sites for resilience, and services can be delivered closest to the end user.

More information on our data centers.

More information on our Google Cloud Platform regions.

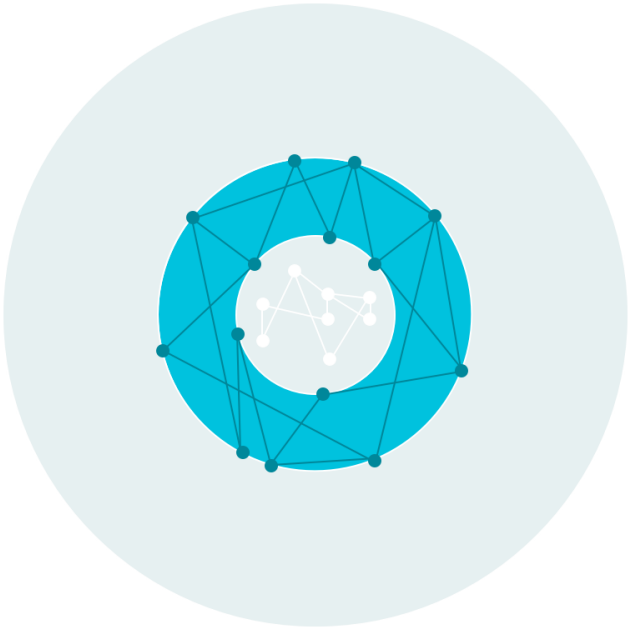


Google

Map data ©2017

Edge PoPs

↑ Data Centers



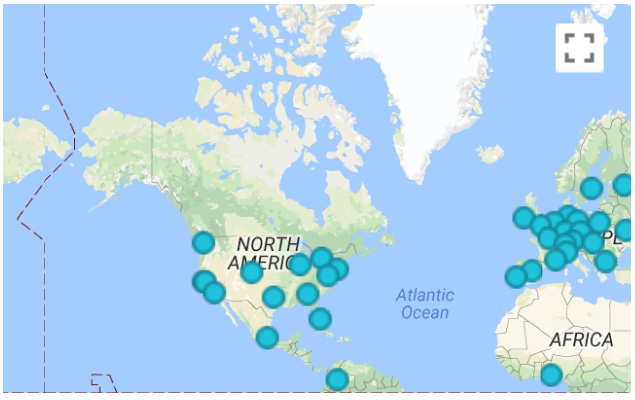
Edge Points of Presence (PoPs)

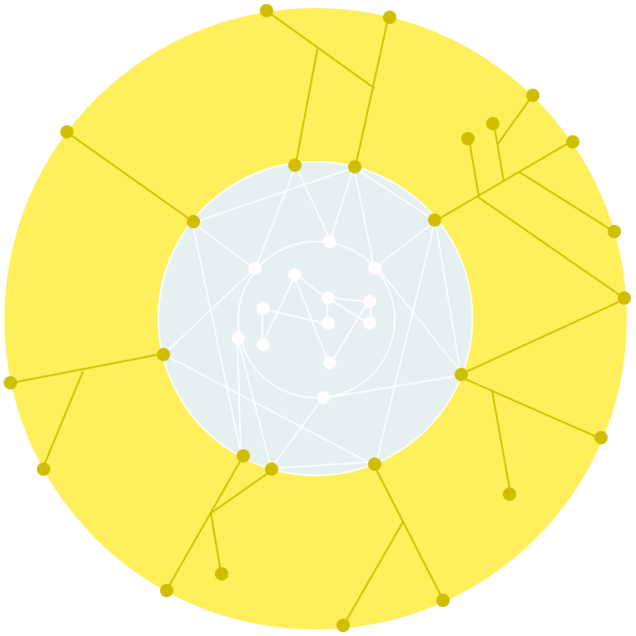
Our Edge Points of Presence (PoPs) are where we connect Google's network to the rest of the internet via peering. We are present on over 90 internet exchanges and at over 100 interconnection facilities around the world.

By operating an extensive global network of interconnection points we can bring Google traffic closer to our peers, thereby reducing their costs and providing users with a better experience.

Google operates a large, global meshed network that connects our Edge PoPs to our data centers.

See our record in peeringdb.com





Map of metros where at least one Edge PoP is present.

Edge Nodes (GGC)

↓

↑

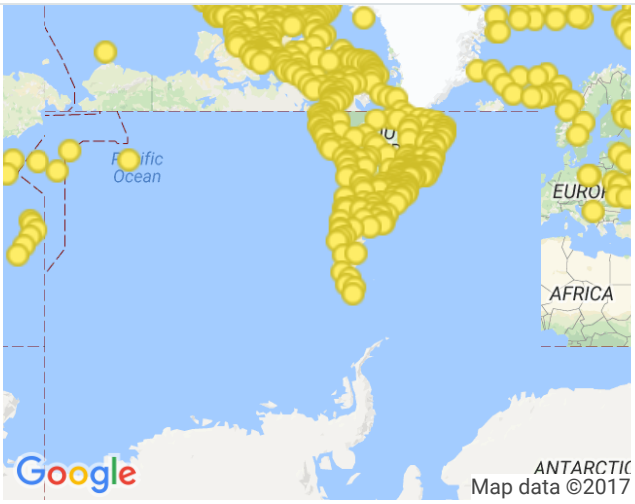
Edge PoPs

Edge nodes (Google Global Cache, or GGC)

Our edge nodes (called Google Global Cache, or GGC) represent the tier of Google's infrastructure closest to our users. With our edge nodes, network operators and internet service providers deploy Google-supplied servers inside their network.

Static content that is very popular with the local host's user base, including YouTube and Google Play, is temporarily cached on edge nodes. Google's traffic management systems direct user requests to an edge node that will provide the best experience.

In some locations, we also use our edge nodes to support the delivery of other Google services, such as Google Search, by proxying traffic where it will deliver improved end-to-end performance for the end user.



Map of metros where at least one Edge node (GGC) is present.

Lean more about how to connect with Google

Edge network options

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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