

United States Court of Appeals for the Federal Circuit

**AKAMAI TECHNOLOGIES, INC.,
THE MASSACHUSETTS INSTITUTE OF
TECHNOLOGY,**
Plaintiffs-Appellants

v.

LIMELIGHT NETWORKS, INC.,
Defendant-Cross-Appellant

2009-1372, 2009-1380, 2009-1416, 2009-1417

Appeals from the United States District Court for the
District of Massachusetts in Nos. 06-CV-11585, 06-CV-
11109, Judge Rya W. Zobel.

Decided: May 13, 2015

SETH P. WAXMAN, Wilmer Cutler Pickering Hale and
Dorr LLP, Washington, DC, argued for plaintiffs-
appellants. Also represented by THOMAS SAUNDERS,
THOMAS GREGORY SPRANKLING; MARK CHRISTOPHER
FLEMING, ERIC FLETCHER, LAUREN B. FLETCHER, BROOK
HOPKINS, Boston, MA; DAVID H. JUDSON, Law Offices of
David H. Judson, Dallas, TX; DONALD ROBERT DUNNER,
KARA F. STOLL, ELIZABETH D. FERRILL, Finnegan, Hender-
son, Farabow, Garrett & Dunner, LLP, Washington, DC;
JENNIFER S. SWAN, Palo Alto, CA; ROBERT S. FRANK, JR.,

G. MARK EDGARTON, CARLOS PEREZ-ALBUERNE, Choate, Hall & Stewart, LLP, Boston, MA.

AARON M. PANNER, Kellogg, Huber, Hansen, Todd, Evans & Figel, P.L.L.C., Washington, DC, argued for defendant-cross appellant. Also represented by JOHN CHRISTOPHER ROZENDAAL, MICHAEL E. JOFFRE; ALEXANDER FRASER MACKINNON, Kirkland & Ellis LLP, Los Angeles, CA; YOUNG JIN PARK, New York, NY; DION D. MESSER, Limelight Networks, Inc., Tempe, AZ.

JERRY ROBIN SELINGER, Patterson & Sheridan LLP, Dallas, TX, for amici curiae Altera Corporation, HTC America, Inc., HTC Corporation, Weatherford International, Inc. Also represented by B. TODD PATTERSON, Houston, TX; GERO MCCLELLAN, Greensboro, NC.

WILLIAM G. BARBER, Pirkey Barber LLP, Austin, TX, for amicus curiae American Intellectual Property Law Association.

TIMOTHY TETER, Cooley LLP, Palo Alto, CA, for amicus curiae Apple Inc. Also represented by BENJAMIN G. DAMSTEDT, IAIN R. CUNNINGHAM, LORI R. MASON; PATRICK J. MURPHY, Apple Computer Inc., Cupertino, CA.

MEREDITH MARTIN ADDY, Katten Muchin Rosenman LLP, Chicago, IL, for amici curiae Aristocrat Technologies Australia PTY Limited, Aristocrat Technologies, Inc. Also represented by ANTHONY R. DE ALCUAZ, McDermott, Will & Emery LLP, Menlo Park, CA.

JOHN W. RYAN, Thompson Hine LLP, Washington, DC, for amicus curiae Biotechnology Industry Organization. Also represented by HANSJORG SAUER, Biotechnology Industry Organization, Washington, DC; THOMAS M. HAAS, Sullivan & Worcester, Washington, DC.

JEFFREY E. FRANCIS, Pierce Atwood LLP, Boston, MA, for amicus curiae Boston Patent Law Association.

GREGORY PAUL STONE, Munger, Tolles & Olson LLP, Los Angeles, CA, for amicus curiae CTIA The Wireless Association. Also represented by HEATHER E. TAKAHASHI, ANDREW W. SONG.

RAYMOND PARDO NIRO, I, Niro, Haller & Niro, Chicago, IL, for amici curiae Cascades Ventures, Inc., VNS Corporation. Also represented by JOHN C. JANKA.

EDWARD R. REINES, Weil, Gotshal & Manges LLP, Redwood Shores, CA, for amici curiae Cisco Systems, Inc., Dell Inc., Google Inc., Hewlett-Packard Company, Intel Corporation, Intuit Inc., Micron Technology, Inc., NetApp, Inc., Ringcentral, Inc., SAP America, Inc., Symantec Corporation, Yahoo! Inc., Zynga Inc., Ebay, Inc. Also represented by NATHAN A. GREENBLATT.

STEVEN C. SEREBOFF, SoCal IP Law Group LLP, Westlake Village, CA, for amicus curiae Conejo Valley Bar Association. Also represented by MEENAKSHI KALA SARVAIYA, MARK ANDREW GOLDSTEIN.

JULIE P. SAMUELS, Electronic Frontier Foundation, San Francisco, CA, for amicus curiae Electronic Frontier Foundation. Also represented by MICHAEL BARCLAY.

MATTHEW D. MCGILL, Gibson, Dunn & Crutcher LLP, for amici curiae Facebook, Inc., LinkedIn Corporation, Also represented by WILLIAM G. JENKS, Jenks IP Law, Washington, DC.

JOHN STEVEN GARDNER, Kilpatrick Townsend & Stockton LLP, Winston-Salem, NC, for amicus curiae The Financial Services Roundtable. Also represented by

ALTON LUTHER ABSHER; GIA L. CINCONI, San Francisco, CA.

PETER J. BRANN, Brann & Isaacson, Lewiston, ME, for amicus curiae Internet Retailers. Also represented by STACY O. STITHAM, DAVID SWETNAM-BURLAND.

GARRETH A. SAROSI, Winstead Attorneys, Dallas, TX, for amicus curiae MetroPCS Wireless, Inc. Also represented by MARK ATKERSON STACHIW, Metro PCS Communications Inc., Richardson, TX.

BENJAMIN JACKSON, Myriad Genetics, Salt Lake City, UT, for amicus curiae Myriad Genetics, Inc. Also represented by JAY Z. ZHANG.

CHARLES A. WEISS, Kenyon & Kenyon LLP, New York, NY, for amicus curiae New York Intellectual Property Law Association. Also represented by THERESA M. GILLIS, Mayer Brown, LLP, New York, NY.

ROBERT P. TAYLOR, Arnold & Porter, LLP, San Francisco, CA, for amicus curiae Pharmaceutical Research and Manufacturers of America. Also represented by MONTY AGARWAL; LISA A. ADELSON, DAVID R. MARSH, Washington, DC; DAVID EVAN KORN, Pharmaceutical Research and Manufacturers Association of America, Washington, DC.

VICKI GEE NORTON, Duane Morris LLP, San Diego, CA, for amicus curiae The San Diego Intellectual Property Law Association.

ERIC LAURENCE ABBOTT, Abbott Law Chartered, Las Vegas, NV, for amicus curiae Shuffle Master, Inc.

CALVIN L. LITSEY, Faegre Baker Daniels LLP, Minneapolis, MN, for amicus curiae Thomson Reuters Corpora-

tion. Also represented by TIMOTHY M. SULLIVAN, AARON D. VAN OORT, CHRISTOPHER J. BURRELL.

MICHAEL K. KIRSCHNER, Hillis, Clark, Martin & Peterson P.S., Seattle, WA, for amicus curiae Washington State Patent Law Association. Also represented by ALEXANDER M. WU.

CHARLES R. MACEDO, Amster Rothstein & Ebenstein LLP, New York, NY, for amici curiae Double Rock Corporation, Island Intellectual Property, LLC, Broadband ITV, Inc. Also represented by JESSICA A. CAPASSO.

Before PROST, *Chief Judge*, LINN, and MOORE, * *Circuit Judges*.

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

Dissenting opinion filed by *Circuit Judge* MOORE.

LINN, *Circuit Judge*.

This appeal returns to us following remand from the United States Supreme Court. *See Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111 (2014). Because our prior decisions in *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007), and *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (Fed. Cir. 2008), directly apply to the facts of this case and because the statutory framework of 35 U.S.C. § 271 does not admit to the sweeping notions of common-law tort liability argued in this case, we again conclude that

* Pursuant to Fed. Cir. Internal Operating Procedure 15 ¶ 2(b)(ii) (Nov. 14, 2008), Circuit Judge Moore was designated to replace Randall R. Rader, now retired, on this panel.

because Limelight Networks, Inc. (“Limelight”) did not perform all of the steps of the asserted method claims of U.S. Patent No. 6,108,703 (the “703 patent”) and because the record contains no basis on which to impose liability on Limelight for the actions of its customers who carried out the other steps, Limelight has not directly infringed the ’703 patent under § 271(a). Accordingly, we affirm the district court’s finding of noninfringement and do not reach Limelight’s cross-appeal regarding damages. We also confirm our previously reinstated affirmance of the district court’s judgment of noninfringement of U.S. Patents No. 6,553,413 (the “413 patent”) and No. 7,103,645 (the “645 patent”). See *Akamai*, 629 F.3d 1311 (Fed. Cir. 2010), which was vacated, 419 F. App’x 989 (Fed. Cir. 2011) (*en banc*), and then partially reinstated. Order No. 2009-1372 (Fed. Cir. Sept. 27, 2012) (*en banc*).

I. BACKGROUND

A detailed description of the history of proceedings, the technology and the claims at issue in this case is set forth in the prior reported opinions of this court and the Supreme Court and will not be repeated except to the extent germane hereto. See *Limelight*, 134 S. Ct. 2111; *Akamai*, 692 F.3d 1301 (Fed. Cir. 2012) (*en banc*); *Akamai*, 629 F.3d 1311.

II. DIVIDED INFRINGEMENT UNDER § 271(a)

In the court’s view, and for the reasons set forth in more detail, *infra*, direct infringement liability of a method claim under 35 U.S.C. § 271(a) exists when all of the steps of the claim are performed by or attributed to a single entity—as would be the case, for example, in a principal-agent relationship, in a contractual arrange-

ment, or in a joint enterprise.¹ Because this case involves neither agency nor contract nor joint enterprise, we find that Limelight is not liable for direct infringement.

Direct infringement under § 271(a) requires a party to perform or use each and every step or element of a claimed method. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). For method patent claims, direct infringement only occurs when a single party or a joint enterprise performs all of the steps of the process. *See Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) (“A method claim is directly infringed only by one practicing the patented method.” (emphasis omitted)); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1567–68 (Fed. Cir. 1983) (“Because the [method] claims include the application of a diazo coating or other light sensitive layer and because Advance’s customers, not Advance, applied the diazo coating, Advance cannot be liable for direct infringement with respect to those plates.”). This holding derives from the statute itself, which states “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” § 271(a). Encouraging or instructing others to perform an act is not the same as performing the act oneself and does not result in direct infringement. *BMC*, 498 F.3d at 1378–79. This is evidenced by the fact that § 271 has separate subsections addressing induced and contributory infringement. When a party participates in or encourages infringement but does not directly infringe a patent, the normal recourse under the law is for

¹ Because this case does not implicate joint enterprise liability, this case is not the appropriate vehicle to adopt joint enterprise liability.

the court to apply the standards for liability under indirect infringement. *Id.* However, indirect infringement requires, as a predicate, a finding that some party is directly liable for the entire act of direct infringement. *Limelight*, 134 S. Ct. at 2115. In circumstances in which one party, acting as “mastermind” exercises sufficient “direction or control” over the actions of another, such that those actions may be attributed to the mastermind, the combined performance of the steps of a method claim will directly infringe under § 271(a). *BMC*, 498 F.3d at 1382. “Under *BMC Resources*, the control or direction standard is satisfied in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method.” *Muniauction*, 532 F.3d at 1330. This may occur in a principal-agent relationship, a contractual relationship or in circumstances in which parties work together in a joint enterprise functioning as a form of mutual agency.

Akamai asserts that the Supreme Court’s *Limelight* decision “strongly implies that a change in direction on § 271(a) is warranted.” Br. for Akamai at 3, *Akamai*, No. 2009-1372 (Fed. Cir. Aug. 18, 2014) (“Akamai’s Letter Br.”). It claims that in lieu of overruling *Muniauction*, this panel can decline to extend it to the facts of this case. *Id.* According to Akamai, an accused infringer “directs or controls” a third party if the accused infringer goes beyond loosely providing instructions and specifically tells a third party the step or steps to perform. *Id.* at 9. In its *en banc* briefing, Akamai cites joint tortfeasor principles as support. *See, e.g.*, Principal Br. for Pls.-Appellants at 21, *Akamai*, 692 F.3d 1301 (*available at* 2011 WL 2822716) (citing Restatement (Second) of Agency § 212, cmt. a (discussing the tort principle that “one causing and intending an act or result is as responsible as if he had personally performed the act or produced the result”)); *id.* at 22 (quoting Restatement (Second) of Torts § 877(a)

(subjecting a party to liability for “order[ing]” conduct)). Limelight responds that Akamai’s expansive attribution theory “would render both Section 271(b) and Section 271(c) meaningless.” Br. of Def.-Cross-Appellant Limelight Networks, Inc. on Rehearing En Banc at 41, *Akamai*, 692 F.3d 1301 (*available at* 2011 WL 3796785) (quoting Mark A. Lemley et al., *Divided Infringement Claims*, 6 Sedona Conf. J. 117, 119–20 (2005) (“Lemley”)).

We begin by considering whether § 271(a) incorporates joint tortfeasor liability, as Akamai and the dissent advocate. Unquestionably, it does not. As codified by Congress, § 271(a) includes only the principles of vicarious liability, as embodied in the single entity rule. Presented with numerous conflicting theories of joint liability that existed in the common law prior to 1952, Congress enacted specific rules for inducement and contributory liability in § 271(b) and (c), respectively. While the dissent believes this leaves a “gaping hole,” Dissent at 1, it is not our position to legislate or contravene Congress’ choice—right or wrong—by importing other theories of joint liability into § 271(a).

The alternative—stretching § 271(a) to include joint tortfeasor liability—is flawed. To make joint tortfeasor liability consistent with the well-established fact that direct infringement liability under § 271(a) is strict liability, Akamai and the dissent must abandon several core tenets of joint tortfeasor law. This position also leads to untenable results. For example, the dissent advocates holding a customer jointly and severally liable for patent infringement based on its performance of a single step of a claimed method, even when it has no knowledge of the patent.

In the analysis that follows we address, in turn, three subjects: the statutory scheme of § 271, the divided infringement case law, and the errors in importing joint tortfeasor liability into § 271(a).

A. The Statutory Scheme of § 271

Patent infringement is not a creation of common law. It is a tort defined by statute. *See Crown Die & Tool Co. v. Nye Tool & Mach. Works*, 261 U.S. 24, 40 (1923) (“The monopoly [granted to the patentee] did not exist at common law, and the rights, therefore, which may be exercised under it cannot be regulated by the rules of the common law.” (quoting *Gayler v. Wilder*, 51 U.S. (10 How.) 477, 494 (1850))); *3D Sys., Inc. v. Aarotech Labs., Inc.*, 160 F.3d 1373, 1379 (Fed. Cir. 1998) (“Defining the contours of the tort of infringement, which exists solely by virtue of federal statute, entails the construction of the federal statute and not a state’s common or statutory law.” (citing *N. Am. Philips Corp. v. Am. Vending Sales, Inc.*, 35 F.3d 1576, 1579 (Fed. Cir. 1994))).

35 U.S.C. § 271(a) provides that:

Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

Section 271(a) defines infringement. H.R. Rep. No. 82-1923, at 9 (1952) (“Section 271, paragraph (a), is a *declaration of what constitutes infringement*.” (emphasis added)). Subsections (b) and (c), in turn, codify the doctrines of inducement and contributory infringement respectively.

The Supreme Court has observed that “the 1952 Act did include significant substantive changes, and . . . § 271 was one of them.” *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 204 (1980). In the 1952 Patent Act, Congress removed joint-actor patent infringement liability from the discretion of the courts, defining “infringement” in § 271(a) and expressly outlining in § 271(b) and (c) the *only* situations in which a party could be liable for

something less than an infringement. This was purposeful. At the time, the courts applied a myriad of approaches to multi-actor infringement: some liberally allowed for multi-actor liability, *see, e.g., Peerless Equip. Co. v. W.H. Miner, Inc.*, 93 F.2d 98, 105 (7th Cir. 1937); *Solva Waterproof Glue Co. v. Perkins Glue Co.*, 251 F. 64, 73–74 (7th Cir. 1918), while others nearly never permitted multi-actor liability, *see, e.g., Mercoid Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 669 (1944) (“[w]hat residuum [of contributory infringement] may be left we need not stop to consider”); *Mercoid Corp. v. Minneapolis-Honeywell Regulator Co.*, 320 U.S. 680, 684 (1944). In enacting § 271(b) and (c), Congress cleared away the morass of multi-actor infringement theories that were the unpredictable creature of common law in favor of two infringement theories that it defined by statute. *See Contributory Infringement in Patents—Definition of Invention: Hearings on H.R. 5988, 4061, and 5248 Before the Subcomm. on Patents, Trademarks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 12 (1948) (statement of Giles S. Rich on behalf of the New York Patent Law Ass’n) (“contributory infringement is a specific application to patent law of the law of joint tortfeasor”); *Hearing on H.R. 3866 Before Subcomm. No. 4 of the H. Comm. on the Judiciary*, 81st Cong. 2 (1949) (statement of Giles S. Rich on behalf of the New York Patent Law Ass’n) (“Time out of mind, under the old common law, there has been a doctrine of joint tortfeasors to the effect that people who jointly commit a tort are jointly and severally liable. This contributory infringement is nothing but the application of that doctrine to patent law.”); *id.* at 3, 6–7; Giles S. Rich, *Infringement Under Section 271 of the Patent Act of 1952*, 35 J. Pat. Off. Soc’y 476, 480 (1953) (“*Contributory infringement* is an expression of the old common law doctrine of *joint tortfeasors*.” (emphases in original)).

Indeed, in this way, Congress carefully crafted subsections (b) and (c) to expressly define the *only* ways in

which individuals not completing an infringing act under § 271(a) could nevertheless be liable. *See, e.g., Dawson*, 448 U.S. at 187–214 (discussing at length the state of contributory infringement prior to the 1952 Patent Act and the legislative history of the 1952 Act). Therefore, to the extent that tort law’s contributory liability principles are applicable at all, § 271(b) and (c) embody the application of contributory liability principles to patent law. *See Cent. Bank of Denver, N.A. v. First Interstate Bank of Denver, N.A.*, 511 U.S. 164, 184 (1994) (“The fact that Congress chose to impose some forms of secondary liability, but not others, indicates a deliberate congressional choice with which the courts should not interfere.”). We must respect Congress’ deliberate choice to enact only certain forms of contributory liability in § 271(b) and (c).²

² Akamai and the dissent argue that the word “whoever” in § 271(a) (“whoever . . . uses . . . any patented invention”) undermines the single entity rule because it is plural. *See* 1 U.S.C. § 1 (“In determining the meaning of any Act of Congress, *unless the context indicates otherwise*—words importing the singular include and apply to several persons, parties, or things” (emphasis added)). The court agrees that “whoever” is plural, but Akamai and the dissent’s argument fails for two reasons. First, the statute simply states the obvious: more than one entity can be independently liable for direct patent infringement if each entity practices every element of the claim. Second, the statutory context, with § 271(b) and (c) extending liability in limited circumstances to actors who do not independently infringe, establishes that § 271(a) excludes joint liability.

The dissent’s interpretation of “whoever” as “any person or persons” is also too sweeping for its purposes. The

Furthermore, Akamai’s broad theory of attribution—in which a defendant would be liable for “causing and intending an act or result,” Akamai’s Letter Br. at 4 (citations omitted)—would render § 271(b) redundant. Subsection (b) states: “Whoever actively induces infringement of a patent shall be liable as an infringer.” The Supreme Court in *Global-Tech*, quoting Webster’s, explained that to induce “means to lead on; to influence; to prevail on; to move by persuasion or influence.” *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2065 (2011) (quoting Webster’s New International Dictionary 1269 (2d ed. 1945)) (internal citations and brackets omitted). Webster’s contains several, somewhat overlapping, definitions for “induce,” one of which is “cause.” Webster’s at 1269; *accord Dansereau v. Ulmer*, 903 P.2d 555, 564 (Alaska 1995); *United States v. McQueen*, 670 F.3d 1168, 1170 (11th Cir. 2012). And even the definitions expressly quoted in *Global-Tech*—namely: to lead on; to influence; to prevail on; to move by persuasion or influence—are all ways to “cause.” The Supreme Court in *Global-Tech* further explained that the adverb “actively” means that “the inducement must involve the taking of affirmative steps to bring about the desired result.” 131 S. Ct. at 2065 (citing Webster’s at 27). This “obviously [requires]

plain meaning of § 271(a), as the dissent would have it, contains no requirement that the parties “act in concert pursuant to a common plan or design,” Dissent at 21, and the dissent introduces it with no statutory basis. The dissent’s analogy to joint inventors, *see id.* at 10, 15, 16, only underscores this problem. That joint inventors must have some connection derives from the word “jointly” found in § 116—*see, e.g., Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 776 F.3d 837, 846 (Fed. Cir. 2015) (citing cases)—not from the word “[w]hoever.”

know[ing] the action that [the inducer] wishes to bring about.” *Id.* Thus, a defendant actively induces patent infringement under § 271(b) if she causes infringement while intending the act or result to occur (along with certain other requirements). *See* Black’s Law Dictionary 1321 (8th ed. 1999) (defining “active inducement” as “[t]he act of intentionally causing a third party to infringe a valid patent”).

But if, as Akamai contends, there is liability under § 271(a) for “one causing and intending an act or result,” there is no need for a separate tort for induced infringement. This is crystallized by the language of the Restatement (Second) of Torts § 877(a)—cited by Akamai—which subjects a defendant to liability for tortious conduct of another if the defendant “orders or *induces* the conduct” (emphasis added).

For essentially the same reasons, Akamai’s broad reading of § 271(a) would make § 271(c) redundant as well. Subsection (c), as originally enacted, stated:

(c) Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

As with § 271(b), liability for § 271(c) requires knowledge or willful blindness of the patent, *Global-Tech*, 131 S. Ct. at 2068, and requires direct infringement. *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro II)*, 377 U.S. 476, 484 (1964). Thus, § 271(c) also entails *causing* customers to act as they did and *intending* the acts and/or results. There is no principled reason why Akamai’s attribution

theory should not apply to combination patents. But it is well settled that the sale of an unpatented component will at most raise a question of infringement under subsection (c), not subsection (a). See 35 U.S.C. § 271(c); *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro I)*, 365 U.S. 336, 339–40 (1961) (because “the fabric is no more than an unpatented element of the combination which was claimed as the invention[,] [i]t follows that petitioners’ manufacture and sale of the fabric is not a direct infringement under 35 U.S.C. § 271(a)”).

While Akamai at various points uses slightly different phrasing for when one party’s actions should be attributed to another, all of its proposed tests suffer the same failing: they make § 271(b) and (c) redundant. Akamai’s proposed interpretation thus contravenes the rule that “we construe statutes, where possible, so as to avoid rendering superfluous any parts thereof.” *Astoria Fed. Sav. & Loan Ass’n v. Solimino*, 501 U.S. 104, 111 (1991).

The dissent is faced with the same problem. To manufacture a single case in which its expansive interpretation of § 271(a) would not render § 271(b) and (c) superfluous, the dissent imposes a requirement that each joint patent infringer must perform at least one step of the method, see Dissent at 14. However, this single step requirement necessitates a new and untested definition of the word “uses.” It also conflicts with the common law of torts—the authority cited by the dissent for its broad interpretation of § 271(a). The common law of torts would hold liable an entity that, with sufficient intent, aided another in committing a tort, even if that entity did not commit any element of the tort itself.

B. Divided Infringement Case Law

Under the language of § 271(a), this court’s “divided infringement” case law is rooted in traditional principles of vicarious liability. Under the principles of vicarious liability, direct infringement does not occur unless all

steps of a method claim are performed by or attributable to a single entity. This is the single entity rule. *BMC* confirmed that where the actions of one party can be legally imputed to another, such that a single entity can be said to have performed each and every element of the claim, that single entity is liable as a direct infringer. 498 F.3d at 1380–81. Before *BMC*, the judiciary and the patent law community recognized that multiple actors could together infringe a patent only if one controlled the other(s). See *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291–92 (9th Cir. 1974) (“Mobil contends that Filtrol and Texaco split between them the performance of the four steps of the claim *We question whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other’s activities.* No case in point has been cited.” (emphasis added)); *BMC Res., Inc. v. Paymentech, L.P.*, No. 3:03-cv-1927, 2006 WL 1450480, at *4 (N.D. Tex. May 24, 2006); Lemley, 6 Sedona Conf. J. at 118 (“[C]ourts have imposed liability for direct infringement *where another person acts as an agent of the alleged infringer.*” (emphasis added)).

Applying traditional principles of vicarious liability to direct infringement under § 271(a) protects patentees from a situation where a party attempts to “avoid infringement . . . simply by contracting out steps of a patented process to another entity It would be unfair indeed for the mastermind in such situations to escape liability.” *BMC*, 498 F.3d at 1381. In addition, in patent law, unlike in other areas of tort law—where the victim has no ability to define the injurious conduct upfront—the patentee specifically defines the boundaries of his or her exclusive rights in the claims appended to the patent and provides notice thereby to the public so that it can avoid infringement. As this court correctly recognized in *BMC*, “[t]he concerns over a party avoiding infringement by arms-length cooperation can usually be offset by proper

claim drafting. A patentee can usually structure a claim to capture infringement by a single party.” 498 F.3d at 1381. Further, many *amici* have pointed out that the claim drafter is the least cost avoider of the problem of unenforceable patents due to joint infringement. It would thus be unwise to overrule decades of precedent in an attempt to enforce poorly-drafted patents.

The dissent asserts that a handful of pre-1952 cases conflict with the single entity rule. But all of these cases do not involve method claims, *see York & Md. Line R.R. Co. v. Winans*, 58 U.S. (17 How.) 30 (1854); *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712 (6th Cir. 1897); *Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871); *Jackson v. Nagle*, 47 F. 703, 703 (C.C.N.D. Cal. 1891); *N.J. Patent Co. v. Schaeffer*, 159 F. 171, 173 (C.C.E.D. Pa. 1908)³, and/or concern contributory (as opposed to direct) infringement. *See Peerless*, 93 F.2d at 105; *Solva*, 251 F. at 73; *Thomson-Houston*, 80 F. at 721; *Wallace*, 29 F. Cas. 74.⁴ Cases discussing apparatus (as opposed to method) claims are not helpful because whoever combines the last element of an apparatus necessarily,

³ *Jackson* related to a claim for infringement of claims 1, 4, and 5 of U.S. Patent No. 263,412 (the “412 patent”), claims 1 and 2 of U.S. Patent No. 269,863 (the “863 patent”), and claims 2 and 3 of U.S. Patent No. 302,338 (the “338 patent”). 47 F. at 703. *Schaeffer* related to a claim for infringement of U.S. Patent No. 782,375 (the “375 patent”). 159 F. at 172. None of these are method claims. *See* ’412, ’863, ’338 and ’375 patents.

⁴ Though *Wallace* does not explicitly use the term, it is a recognized example of contributory infringement. *See Dawson*, 448 U.S. at 187–88; *Aro II*, 377 U.S. at 500; *Henry v. A.B. Dick Co.*, 224 U.S. 1, 34 (1912) (all describing *Wallace* as an example of contributory infringement).

individually, “makes” the invention. Thus, in the case of an apparatus claim, there is always a single entity directly infringing the patent. By contrast, because “a process is nothing more than the sequence of actions of which it is comprised, the use of a process necessarily involves doing or performing each of the steps recited.” *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005). As such, only method claims can raise an issue of divided infringement.

The contributory infringement cases are, by their terms, not discussing direct infringement. The dissent acknowledges this, *see* Dissent at 20 (“some of the[se] pre-1952 principles and cases . . . are more akin to what we today consider to be indirect infringement than direct infringement under § 271(a)”), but suggests that the 1952 Act changed the contours of direct infringement, categorizing certain behaviors that formerly were described as contributory infringement as direct infringement. This is wrong. The enactment of § 271(a) “left intact the entire body of case law on direct infringement.” *Warner-Jenkinson*, 520 U.S. at 26–27 (quoting *Aro I*, 365 U.S. at 342). Today, just as in 1952, where a single entity does not perform each and every claim limitation, that entity may not be characterized or held liable as a direct infringer. *See Aro I*, 365 U.S. at 340; *Fromson*, 720 F.2d at 1567–68. Contributory actions—such as the performance of some, but not all, steps of a method claim—do not meet the all elements test, and thus must be analyzed exclusively under the rules of indirect infringement. *BMC*, 498 F.3d at 1381 (“[E]xpanding the rules governing direct infringement to reach independent conduct of multiple actors would subvert the statutory scheme for indirect infringement.”). Therefore, the principles of vicarious liability govern § 271(a).

Turning to the scope of vicarious liability, the vicarious liability test includes, for example, principal-agent relationships, contractual arrangements, and joint enter-

prises. In a principal-agent relationship, the actions of the agent are attributed to the principal. Similarly, when a contract mandates the performance of all steps of a claimed method, each party to the contract is responsible for the method steps for which it bargained. However, this type of contractual arrangement will typically not be present in an arms-length seller-customer relationship.

Finally, in a joint enterprise, the acts of each participant are, by definition, imputed to every member.

All members of a joint venture may be jointly and severally liable to third persons for wrongful acts committed in furtherance of the joint enterprise or venture. Thus, the negligence of one participant in the enterprise or venture, while acting within the scope of agency created by the enterprise, may be imputed to another participant so as to render the latter liable for the injuries sustained by third persons as a result of the negligence.

48A C.J.S. *Joint Ventures* § 62 (footnotes omitted); *see also* Restatement (Second) of Torts § 491 (1965) (“Any one of several persons engaged in a joint enterprise, such as to make each member of the group responsible for physical harm to other persons caused by the negligence of any member, is barred from recovery against such other persons by the negligence of any member of the group.”). A joint enterprise exists for the purposes of imposing vicarious liability when there is:

(1) an agreement, express or implied, among the members of the group; (2) a common purpose to be carried out by the group; (3) a community of pecuniary interest in that purpose, among the members; and (4) an equal right to a voice in the direction of the enterprise, which gives an equal right of control.

Restatement (Second) of Torts § 491, cmt. c.; *see also* 57B Am. Jur. 2d *Negligence* § 1138 (2015).

C. Errors in Importing Joint Tortfeasor Liability into § 271(a)

The majority and dissent agree that liability exists under traditional principles of vicarious liability, such as where a mastermind directs or controls another to perform all steps of a claimed method. But the dissent’s rule is far broader—Akamai and the dissent insist that they can thrust common law joint tortfeasor liability into § 271(a). The dissent would extend liability to “include[] parties who act in concert to collectively perform the claimed process pursuant to a common plan, design, or purpose.” Dissent at 16. The error of this approach is that it attempts to fit a square peg in a round hole: joint tortfeasor law and § 271 are fundamentally incompatible. To import joint tortfeasor law into § 271(a), Akamai and the dissent depart from three indispensable common law limits on joint tortfeasor liability.

First, the Restatement is clear that joint tortfeasor liability “includes only situations in which the defendant has been personally guilty of tortious conduct.” Restatement (Second) of Torts § 875, cmt. a (1979). Yet personal guilt of direct infringement of a method claim under § 271(a) requires performance by the accused of all steps recited in the claim. The Restatement (Second) of Torts § 876, cmt. c (1979) explains that “[o]ne who innocently, rightfully and carefully does an act that has the effect of furthering the tortious conduct or cooperating in the tortious design of another is not for that reason subject to liability.” Thus, contrary to Akamai’s and the dissent’s positions, actors whose innocent actions coordinate to cause harm generally are not subject to liability at common law.

Second, the dissent purports to adopt the Restatement’s rule of action in concert. But, according to the

Restatement, “[p]arties are acting in concert when they act in accordance with an agreement to cooperate in a particular line of conduct or to accomplish a particular result.” Restatement (Second) of Torts § 876, cmt. a. This definition stresses that there must be mutual agreement between the parties. Thus, the Restatement describes “acting in concert” as a form of “mutual agency.” *Id.* This is consistent with the early patent law treatises that limited joint infringement to parties “acting in complicity with others,” 3 William C. Robinson, *The Law of Patents for Useful Inventions* § 946 (1890), or parties “cooperat[ing]” in infringement, Albert H. Walker, *Textbook of the Patent Laws of the United States of America* § 406 (4th ed. 1904). There is no mutual agency or cooperation when parties act independently for their own benefit, such as in arms-length seller-customer relationships.

The dissent, meanwhile, would extend liability even to arms-length agreements, so long as one party “know[s] of th[e] [other] party’s actions.” Dissent at 27. This position contravenes both patent law and tort law. The Supreme Court in *Global-Tech* held that “a direct infringer’s knowledge or intent is irrelevant,” 131 S. Ct. at 2065 n.2, yet the dissent imposes a knowledge requirement. And common tort law requires *both* parties to know the others’ actions to act in concert. *See* Restatement (Second) of Torts § 876(a) (“a tortious act *in concert* with the other or pursuant to a *common design* with him” (emphases added)). One party is “not acting in concert with the other” if it “innocently, and carefully, does an act which happens to further the tortious purpose of [the] [other].” W. Page Keeton et al., *Prosser & Keeton on Torts* § 46 (1984). Further, as Prosser and Keeton make clear, even more is required. “There are even occasional statements that mere knowledge by each party of what the other is doing is sufficient ‘concert’ to make each liable for the acts of the other; but *this seems clearly wrong.*” *Id.* (emphasis added). Here, there is no evidence that Lime-

light’s customers knew what steps Limelight was taking, much less evidence that they coordinated further. Thus, there was no concert of action. *Contrast* Dissent at 25 (stating that Limelight and its customers acted “in concert”); *id.* at 29 (same).

Third, the Restatement describes yet another requirement for concerted action: knowledge of harm. The common law sources cited in Akamai’s briefs acknowledge that, for joint liability, a defendant needs knowledge of damage done or harm caused. *See* Akamai’s Letter Br. at 5 (quoting Prosser, § 47, which requires knowing that the conduct will “cause damage”); Br. for Resp’ts at 26, *Akamai*, 134 S. Ct. 2111 (*available at* 2014 WL 1260422) (“Akamai’s Supreme Court Br.”) (quoting *Warren v. Parkhurst*, 92 N.Y.S. 725, 727 (N.Y. Sup. Ct. 1904), which requires “*knowing* that the contributions by himself and the others . . . w[ould] result necessarily in the destruction of the plaintiff’s property” (emphasis and alterations in Akamai’s Supreme Court Br.)); *id.* at 27 (quoting *Folsom v. Apple River Log-Driving Co.*, 41 Wis. 602, 610 (1877), which found liability for flooding where defendant “had notice beforehand of such obstruction, and of the fact that its effect, together with the company’s use of the water beyond its natural flow, would be to flo[od] the plaintiff’s land” (alterations in Akamai’s Supreme Court Br.)); *id.* at 28–29 (quoting *Wallace*, 29 F. Cas. at 80, which imposed joint liability where parties “engaged in a common purpose to infringe the patent”). Indeed, this common law requirement was statutorily enacted into 35 U.S.C. § 271(b) and (c). *See Global-Tech*, 131 S. Ct. at 2068 (holding that both subsections (b) and (c) “require[] knowledge [or willful blindness] of the existence of the patent that is infringed”).

This is consistent with the description in Prosser & Keeton requiring “a common plan or design to commit a tortious act,” *Prosser & Keeton on Torts* § 46. To apply a “knowledge of the harm” principle to § 271(a), however,

would require knowledge of the patent, knowledge of the steps recited in the claims, and knowledge of the risk of infringement presented by performance of those steps. Adopting such a requirement for liability under § 271(a) would be contrary to centuries of settled Supreme Court precedent that “a direct infringer’s knowledge or intent is irrelevant.” *Global-Tech*, 131 S. Ct. at 2065 n.2; *see also Hogg v. Emerson*, 52 U.S. 587, 607 (1850).

The dissent’s reasoning for eliminating these three common law limits on joint tortfeasor liability is that “not all joint tortfeasor scenarios are permissible under the language of § 271(a).” Dissent at 28. But this simple response is wholly insufficient—it does not explain why patent law should allow for more expansive joint tortfeasor liability than other areas of law. The common law has carefully crafted these limits on tort liability over centuries, in light of fairness and justice. We may not blithely toss these limits aside.

The dissent’s rule also leads to several extraordinary results. For example, a customer who performs a single step of a patented method by merely using a product as intended would be jointly and severally liable for direct infringement under § 271(a). *See* Dissent at 10 (“whoever . . . uses’ a process for the purposes of infringement covers multiple parties who act in concert”). It is nothing short of remarkable that while Congress and state legislators express their concern about the vulnerability of innocent customers to charges of patent infringement, Akamai and the dissent labor to create an unprecedented interpretation of existing law to make customers significantly more vulnerable to such charges. This is especially troubling given that the customer can be liable even without knowing of the patent. Moreover, the dissent’s “knowledge of the others’ actions” requirement is an illusory protection for customers and other unsuspecting parties. Institution of a patent infringement lawsuit informs accused infringers of third parties’ actions, so, at

most, requiring knowledge of the others' actions limits the patentee's recovery to post-suit damages.

The drastic expansion of predatory customer suits is not a theoretical concern. Several *amici*, the White House, and other commentators identify numerous instances where patentees have sent demand letters to or sued dozens, hundreds, or, in some cases, even thousands of unsophisticated downstream users.⁵ If the law were expanded to impose joint and several liability on users of a single prior art method step, it would subject swathes of innocent actors across diverse industries to these practices.⁶ Using real patents as examples, *amici* warn that individuals could be liable for patent infringement for so little as initiating communication with a doctor or swiping

⁵ Br. of Amicus Curiae Elec. Frontier Found. in Supp. of Def. at 6–8, *Akamai*, 692 F.3d 1301 (Fed. Cir. Aug. 9, 2011) (*available at* 2011 WL 3796789) (“EFF Br.”); Corrected Br. of Amici Curiae Cisco Sys., Inc. et al. in Supp. of Def.-Cross-Appellant at 4–5, *Akamai*, 692 F.3d 1301 (Fed. Cir. Aug. 15, 2011) (*available at* 2011 WL 4438649) (“Cisco Br.”); Executive Office of the President, *Patent Assertion and U.S. Innovation*, at 10–12 (June 2013); Gaia Bernstein, *The Rise of the End User in Patent Litigation*, 55 B.C. L. Rev. 1443, 1443–46 (2014); Brian Love & James Yoon, *Expanding Patent Law’s Customer Suit Exception*, 93 B.U. L. Rev. 1605, 1610–11 (2013).

⁶ See, e.g., Br. of Amici Curiae Newegg and L.L. Bean in Supp. of Pet’r at 18–22, *Limelight*, 134 S. Ct. 2111 (Feb. 28, 2014) (*available at* 2014 WL 880929); Br. of Amici Curiae Cargill, Inc. et al. in Supp. of Pet’r Lime-light Networks, Inc. at 8–10, *Limelight*, 134 S. Ct. 2111 (Mar. 3, 2014) (*available at* 2014 WL 880935); Cisco Br. at 4–7.

a debit card.⁷ Another *amici* explains that “the hundreds if not thousands of contracts in a technology company’s supply chain could expose each actor in that supply chain to potential patent infringement liability” Cisco Br. at 5. Based on this fact, a patentee could draft “dependent claims whose sole purpose is to add prior art steps precisely to increase the patent applicant’s litigation and licensing options post-issuance.” *Id.* at 4.

Finally, the dissent’s position leads to another perverse result: the addition of a claim *limitation* can actually serve to make more parties liable for infringement. Consider a hypothetical in which independent claim 1 recites a “replicating” step and claim 2, dependent therefrom, adds the limitation of a “tagging” step. The dissent’s rule, which requires only concerted action and does not require attribution of the acts of one party to the other, would result in a party that performs the tagging step but not the replicating step being liable for directly infringing dependent claim 2 while not being liable for infringing the broader claim from which it depends. This conflicts with the “long . . . established” rule that a dependent claim cannot be infringed unless the independent claim from which it depends is also infringed. *Teledyne McCormick Selph v. United States*, 558 F.2d 1000, 1004 (Ct. Cl. 1977); *accord Ferring B.V. v. Watson Labs., Inc.-Fla.*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) (“Because we hold that the asserted independent claims of Ferring’s patents are not infringed, the asserted dependent claims are likewise not infringed.” (citing cases)).

⁷ EFF Br. at 5; Br. of Amicus Curiae The Financial Services Roundtable in Supp. of Limelight Networks, Inc. and Affirmance at 27, *Akamai*, 692 F.3d 1301 (Fed. Cir. Aug. 15, 2011) (*available at* 2011 WL 7730148).

III. THE FACTS OF THIS CASE

Akamai argues that the facts here are different from those in *Muniauction*, because Limelight provides more specific instructions and because it has a contract with its customers. Akamai’s Letter Br. at 8–9; *see also* Corrected Br. of Pls.-Appellants at 44, *Akamai*, 629 F.3d 1311 (available at 2009 WL 6849543) (“Akamai’s Op. Br.”). Limelight argues that the law has not changed since the original panel decision. The same precedents that led to the original panel decision, most notably *BMC* and *Muniauction*, are still binding on this court. Br. for Limelight at 1–2, *Akamai*, No. 2009-1372 (Fed. Cir. Aug. 18, 2014). In its original panel briefing, it argued that the district court was correct that this case is “indistinguishable” from *Muniauction*. *See* Principal and Resp. Br. of Def.-Cross-Appellant Limelight Networks, Inc. at 34, *Akamai*, 629 F.3d 1311 (available at 2009 WL 5070030). It further argues that even if there is a contract between Limelight and its customers, which it contests, this contract “does not compel the customer to do anything.” *Id.* at 41.

In this case, there is nothing to indicate that Limelight’s customers are performing any of the claimed method steps as agents for Limelight, or in any other way vicariously on behalf of Limelight. To the contrary, Limelight’s customers direct and control their own use of Limelight’s content delivery network (“CDN”). Limelight’s customers serve their own web pages, and decide what content, if any, they would like delivered by Limelight’s CDN. Customers sometimes even have Limelight’s CDN and competing CDNs simultaneously deliver the same content. As such, customers—not Limelight—direct and control which CDN delivers each and every object of their content. Limelight’s customers do not become Limelight’s agents simply because Limelight provides its customers a written manual explaining how to operate Limelight’s product.

Moreover, Limelight's CDN is a service similar to Thomson's on-line auction system in *Muniauction*, and Limelight's relationship with its customers is similar to Thomson's relationship with the bidders. In both cases, customers are provided instructions on use of the service and are required to perform some steps of the claimed method to take advantage of that service. In *Muniauction*, the customers performed the step of bidding. Here, the customers determine what website content should be delivered by Limelight's CDN and then, allegedly, perform the step of "tagging" that content. Limelight's customers also perform the step of "serving" their own web pages. As the district court found, there is "no material difference between Limelight's interaction with its customers and that of Thompson in *Muniauction*." *Akamai*, 614 F. Supp. 2d at 122.

Akamai also argues that the relationship between Limelight and its customers compels a finding of infringement because Limelight "contracts out to content providers the claim steps that it alone does not perform." Akamai's Op. Br. at 40. This assertion stems from Limelight's standard form contract that, according to Akamai, "obligates content providers to perform the claim steps of tagging the embedded objects and serving the tagged page so that requests for the embedded objects resolve to Limelight's network instead of the content provider's." *Id.* For this argument, Akamai relies on the statement in *BMC* that "[a] party cannot avoid infringement . . . simply by contracting out steps of a patented process to another entity," 498 F.3d at 1381.

Akamai's reliance on this statement is misplaced. As discussed above, Limelight's customers decide what content, if any, they choose to have delivered by Limelight's CDN and only then perform the "tagging" and "serving" steps. The form contract does not *obligate* Limelight's customers to perform any of the method steps. It merely explains that customers will have to perform

the steps *if* they decide to take advantage of Limelight's service. Because the customers were acting for their own benefit, Limelight is not vicariously liable for the customers' actions. *See BMC*, 498 F.3d at 1379 (holding that liability exists only where the accused infringer has "someone else carry out one or more of the claimed steps on its behalf"); *Muniauction*, 532 F.3d at 1329 ("mere 'arms-length cooperation' will not give rise to direct infringement by any party") (quoting *BMC*, 498 F.3d at 1381).

In the present case, the asserted claims were drafted so as to require the activities of both Limelight and its customers for a finding of infringement. Thus, Akamai put itself in a position of having to show that the allegedly infringing activities of Limelight's customers were attributable to Limelight. Akamai did not meet this burden because it did not show that Limelight's customers were acting as agents of or otherwise contractually obligated to Limelight or that they were acting in a joint enterprise when performing the tagging and serving steps. Accordingly, we affirm the district court's grant of Limelight's motion for JMOL of non-infringement under § 271(a).

IV. CONCLUSION

For the foregoing reasons, this court affirms the district court's grant of Limelight's motion for JMOL of non-infringement of the '703 patent.

Limelight argues as an alternative ground for affirmance that Akamai presented no substantial evidence that Limelight or its customers actually performed the tagging limitation as properly construed. Because we find that the district court properly granted JMOL of noninfringement on the ground stated, we need not and do not address this argument. Likewise, we do not reach Limelight's conditional cross-appeal of the damages award alleging that Akamai failed to present economic proof of a

causal link between Limelight's infringement and any Akamai lost sales.

We also confirm our previously reinstated affirmance of the district court's judgment of noninfringement of the '413 and '645 patents.

AFFIRMED

United States Court of Appeals for the Federal Circuit

AKAMAI TECHNOLOGIES, INC.,
THE MASSACHUSETTS INSTITUTE OF
TECHNOLOGY,
Plaintiffs-Appellants

v.

LIMELIGHT NETWORKS, INC.,
Defendant-Cross-Appellant

2009-1372, 2009-1380, 2009-1416, 2009-1417

Appeals from the United States District Court for the District of Massachusetts in Nos. 06-CV-11585, 06-CV-11109, Judge Rya W. Zobel.

MOORE, *Circuit Judge*, dissenting.

Today the majority holds that the actions of multiple parties can only result in direct infringement of a method claim in three circumstances: in a principal-agent relationship, in a contractual arrangement, or in a joint enterprise functioning as a form of mutual agency. It divorces patent law from mainstream legal principles by refusing to accept that § 271(a) includes joint tortfeasor liability. The majority's rule creates a gaping hole in what for centuries has been recognized as an actionable form of infringement. It claims that this result is mandated by the statute. I do not agree. The single entity

rule promulgated in *BMC* and *Muniauction* is a recent judicial creation inconsistent with statute, common law, and common sense. For centuries, the concerted actions of multiple parties to infringe a patent gave rise to liability. The plain language of § 271(a) codified this joint infringement. To construe that language otherwise would permit identical language in the statute to have inconsistent meanings. Congress meant to and did codify liability for joint infringement. It did not, as the majority suggests, purposefully do away with a broad swath of recognized forms of liability for infringement. I respectfully *dissent* from the majority's decision to interpret § 271(a) in a manner that condones the infringing conduct in this case.

Without the innovative technology protected by the patent-in-suit, the Internet as we know it would not exist. In the mid-1990s, the Internet was exploding. Ever increasing numbers of users were sharing increasingly bandwidth-heavy information, often at great distances. From text to photos to music and videos, users were placing exponentially greater pressure on the infrastructure of the Internet. Congestion and interruptions in service were standard.

Mirroring, where an entire website is replicated on multiple servers in multiple locations, was a known solution to some of these problems. However, mirroring came with problems of its own. Mirroring was not scalable, and content providers had less control over mirrored data stored on servers in distant locations. Because of the overhead required to synchronize mirrored websites at multiple locations, mirroring was inefficient for websites with dynamic information.

Dr. Tom Leighton, a professor of theoretical mathematics at MIT, and Danny Lewin, his research assistant, solved these problems. They developed a scalable net-

work of mirrored, geographically distributed servers for delivering content (content delivery network or CDN). To direct requests for this content, they developed a domain name system that could intelligently select a suitable CDN server from which the user could obtain the requested content. And they developed a method by which content providers could “tag” content to be delivered by the CDN, rather than their own servers. Using their invention, a content provider like ESPN could serve the text of its website (with news articles updated in real time) from its own servers and tag static, bandwidth-heavy content (such as photos and videos accompanying a news article) to be served by the CDN, reducing the burden on ESPN’s server. Dr. Leighton and Mr. Lewin’s invention promised efficient, scalable delivery of tagged content while maintaining a content provider’s flexibility and control over other content.

To protect their innovation, Dr. Leighton and Mr. Lewin patented their invention. They then founded Akamai, the exclusive licensee of the patent-in-suit, U.S. Patent No. 6,108,703. Akamai was an immediate success, and its dramatically improved method of delivering content was compared to “great historical shifts—discoveries of better, faster ways—like the invention of Arabic numerals, or the development of seafaring.” Paul Spinrad, *The New Cool: Akamai Overcomes the Internet’s Hot Spot Problem*, WIRED (Aug. 1999), available at http://archive.wired.com/wired/archive/7.08/akamai_pr.html.

In response to Akamai’s success, competitors began copying Akamai’s methods of distributing content. Limelight, founded a few years after Akamai, is one such competitor. A jury found that Limelight, in collaboration with its content provider customers, practices every step of the methods disclosed in four claims of the ’703 patent. For example, of the four steps of claim 34 of the ’703

patent, Limelight performs every step save one: the “tagging” step. This step is performed by Limelight’s customers, who tag the content to be hosted and delivered by Limelight’s CDN. Limelight instructs its customers how to tag, and employees are on call if its customers require additional assistance. Moreover, Limelight requires all of its customers to sign a standard contract. The contract delineates the steps that must be performed by these customers if they use the Limelight service—steps that include tagging content. When Limelight’s content delivery customer chooses to use Limelight’s CDN to deliver web content to Internet users, it must tag content. It has no choice: if it wishes to use the product, it must tag content. Limelight itself then performs all of the other steps of Akamai’s patent claims. Thus, every time Limelight’s service is used, all the claim steps of Akamai’s patent are performed as part of the Limelight CDN service.

When Dr. Leighton and Mr. Lewin patented their invention, they expected our legal system to protect their intellectual property. For all of history, a company that did what Limelight had done would be liable for patent infringement. Limelight performed all but one step of a patented method, and Limelight directed its customers to perform that final step. Both Limelight and its customers obtained the economic benefits of performing all of the steps of the claimed patent—namely, faster, more efficient delivery of tagged content coupled with control and flexibility over untagged content. To say Limelight has not committed the tort of patent infringement is inconsistent with the common law, the plain language of the Patent Act, and centuries of patent law that preceded *BMC* and *Muniauction*.

I. The Creation of the Single Entity Rule and the Direction or Control Test

The majority’s ruling today rests on its application of one rule—the single entity rule—and its interpretation of another—the direction or control test. Before explaining why the majority’s view of these rules are inconsistent with the statute, it is helpful to briefly explain the manner by which they came into being.

BMC treated the single entity rule as if it were a first principle, proclaiming that “[i]nfringement requires, as it always has, a showing that a defendant has practiced each and every element of the claimed invention.” *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007). It concluded—without analysis—that the single entity rule was derived from the use of the term “whoever” in § 271(a). *Id.* To support this seemingly age-old proposition, *BMC* cited to the Supreme Court’s holding in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997), that the doctrine of equivalents should be performed on an element-by-element basis. *BMC*, 498 F.3d at 1380. As commentators have noted, *Warner-Jenkinson*’s discussion of the all elements rule does not support the much narrower proposition that *BMC* attributed to it. *See, e.g.*, W. Keith Robinson, *No “Direction” Home: An Alternative Approach to Joint Infringement*, 62 AM. U. L. REV. 59, 86 (2012); Damon Gupta, *Virtually Uninfringeable: Valid Patents Lacking Protection Under the Single Entity Rule*, 94 J. PAT. & TRADEMARK OFF. SOC’Y 61, 63 n.32 (2012); *see also* Dennis Crouch, *Joint Infringement: When Multiple Actors Work in Concert*, Patently-O (Apr. 14, 2011), <http://www.patentlyo.com/patent/2011/04/joint-infringement-when-multiple-actors-work-in-concert.html> (“In several post-1952 cases, the Supreme Court has stated that an invention must actually be infringed—i.e., practiced—before someone can be liable for indirect infringement. However, in those cases, the Supreme

Court did not state that the actual infringement must be performed by a single entity.”). Further, as the amici and commentators have noted, there does not appear to be any precedential support for the single entity rule. Brief of Amicus Curiae Pharmaceutical Research and Manufacturers of America at 8, *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (No. 09-1372) (“[T]here is no longstanding or properly considered rule that requires all the steps of a method claim to be performed by a single actor, and there is a significant body of law that holds otherwise.”) (“Pharmaceutical Research Amicus Brief”); Brief of Amicus Curiae Biotechnology Industry Organization at 23, *Akamai*, 692 F.3d 1301 (No. 09-1372) (“Nothing in Supreme Court jurisprudence indicates that the predicate act of direct infringement can only be undertaken by a single entity.”) (“Biotechnology Amicus Brief”); W. Keith Robinson, *No “Direction” Home: An Alternative Approach to Joint Infringement*, 62 AM. U. L. REV. 59, 86 (2012) (noting that “none of these cases [relied on by *BMC*] explicitly state that ‘a single entity’ must perform each and every step of a claimed method to be a direct infringer.”); Brett M. Jackson, *Bridging the (Liability) Gap: The Shift Toward § 271(b) Inducement in Akamai Represents a Partial Solution to Divided Infringement*, 54 B.C. L. REV. 2127, 2151 (2013) (discussing the “‘single entity’ rule announced in *BMC*”).

With scant analysis, the single entity rule was born. To the extent there was any confusion about the use of the term “a defendant” in *BMC*, the court’s *Muniauction* decision made clear that “direct infringement requires a *single* party to perform every step of a claimed method.” *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008) (emphasis added). Both *BMC* and *Muniauction* explain that whether the combined acts of multiple parties should be attributed to a single entity is determined by the “direction or control” test—“where the

actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises ‘direction or control’ over the entire process such that every step is attributable to the controlling party, i.e. the ‘mastermind.’” *Muniauction*, 532 F.3d at 1329 (quoting *BMC*).

Neither of these cases supports the claim that the single entity rule is some longstanding, well-accepted principle. A host of amici and commentators agree that *BMC* and *Muniauction*’s pronouncement of the single entity rule changed the law, vitiated broad classes of patents, and created a gaping loophole in infringement liability. Brief of Amicus Curiae Boston Patent Law Association at 1, *Akamai*, 692 F.3d 1301 (No. 09-1372) (“[The single entity rule] improperly and unnecessarily renders worthless an entire class of interactive method patents and will undermine the public’s confidence in patents and in the patent system as a whole.”); Brief of Amicus Curiae Cascades Ventures, Inc. at 5–6, 11, *Akamai*, 692 F.3d 1301 (No. 09-1372) (“[*BMC* and *Muniauction*] have changed the law to create a gaping hole in liability for patent infringement” and the *Akamai* panel decision has “destroyed thousands of duly issued patent claims.”) (“Cascades Amicus Brief”); Brief of Amicus Curiae Myriad Genetics, Inc. at 2–3, *Akamai*, 692 F.3d 1301 (No. 09-1372) (noting that strict application of the single entity rule “encourages collusion among collaborating parties to escape infringement liability[,] eviscerates a large number of method patent claims in the field of personalized medicine, as well as many other fields, and significantly weakens the U.S. patent system”) (“Myriad Amicus Brief”); Biotechnology Amicus Brief at 9–10 (“[T]his Court’s single entity rule invites would-be infringers to circumvent a particularly valuable subset of biotechnology patents by ‘dividing up’ steps of patented methods for separate practice, and avoiding the kinds of

formal legal relationships that were only recently established by this Court as a predicate to infringement liability.”); Stacie L. Greskowiak, *Joint Infringement After BMC: The Demise of Process Patents*, 41 LOY. U. CHI. L.J. 351, 403 (2010) (“Without judicial recourse, the ‘direction or control’ standard will render thousands of socially valuable and otherwise valid process patents unenforceable.”); Alice Juwon Ahn, *Finding Vicarious Liability in U.S. Patent Law: The “Control or Direction” Standard for Joint Infringement*, 24 BERKELEY TECH. L.J. 149, 171 (2009) (“[M]any thousands of patents may become worthless under the stringent ‘control or direction’ standard set forth in the *Muniauction* decision.”); Long Truong, *After BMC Resources, Inc. v. Paymentech, L.P.: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable*, 103 NW. U. L. REV. 1897, 1899 (2009) (“The loophole [created by *BMC*] is a serious one. It encourages potential infringers of process patents to enter into conspiracies to circumvent infringement liability by dividing steps among the parties so long as there is no controlling or directing party.”); Dolly Wu, *Joint Infringement and Internet Software Patents: An Uncertain Future?*, 91 J. PAT. & TRADEMARK OFF. SOC’Y 439, 441 (2009) (“The [*Muniauction*] decision creates a catch-22 situation because it is unlikely for vicarious liability relationships to exist across the Internet. Due to *Muniauction*, not only are many Internet software patents now unenforceable, but many other network and communication patents may also be unenforceable.”).

That many patentees crafted their patent claims in a manner that is incapable of being infringed belies the proposition that there was a long-standing single entity requirement for direct infringement. I do not agree with the majority that this patent, and the thousands of other patents across many different industries, drafted in a manner which contemplated joint infringement liability,

are “poorly-drafted.” Maj. at 17. Instead, we have changed the rules on these folks. *Clarity is not a virtue we can claim in this particular scenario.*

II. Joint Infringement Liability Under § 271(a)

Section 271 defines the requirements for infringement. This case is first, last, and entirely about statutory construction. Section 271(a) provides that: “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” 35 U.S.C. § 271(a). All agree that infringement of a process claim requires each claimed step to be performed—that is how the process is “use[d].” Nothing about joint infringement changes or undermines the all elements rule. For infringement to occur, all the elements or steps must be performed. The dispute here is about who must perform those steps. That dispute centers around the meaning of “whoever.”

“Whoever,” as used in § 271(a), encompasses multiple entities. Dictionaries define “whoever” in the plural as “[w]hatever person or *persons*.” Principal Brief for Plaintiff-Appellant Akamai on Rehearing En Banc at 15, *Akamai*, 692 F.3d 1301 (No. 09-1372) (quoting *American Heritage College Dictionary* 1540 (3d ed. 1997)); Brief of Amicus Curiae AIPLA at 11, *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111 (2014) (No. 12-786) (quoting *American Heritage Dictionary of the English Language* (4th ed. 2000)) (“AIPLA Amicus Brief”). The Dictionary Act states that “words importing the singular include and apply to several persons, parties, or things,” and it expressly defines “whoever” as including plural entities: “the words ‘person’ and ‘whoever’ include corporations, companies, associations, firms, partnerships, societies, and joint stock companies, as well as individu-

als.” 1 U.S.C. § 1. By its plain language, the phrase “whoever . . . makes, uses, offers to sell, or sells any patented invention . . . infringes the patent” means “any person or persons who make, use, offer to sell, or sell any patented invention infringe the patent.”

The word “whoever” appears in other sections of the Patent Act, and in each case the word “whoever” expressly includes the collective actions of multiple persons. Identical terms are presumed to have the same meaning within a statute, even if the terms appear in different sections. *Sullivan v. Stroop*, 496 U.S. 478, 484 (1990) (“[T]he normal rule of statutory construction [is] that identical words used in different parts of the same act are intended to have the same meaning.”); *see also* Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 170–73 (2012) (“A word or phrase is presumed to bear the same meaning throughout a text Th[is] presumption . . . applies also when different sections of an act or code are at issue.”). 35 U.S.C. § 101 states that “whoever invents or discovers any new and useful process . . . may obtain a patent therefor” All agree that “whoever” in § 101 includes *joint inventors*. *See* 35 U.S.C. § 116(a); *see also* 35 U.S.C. §§ 161, 171. One can be a joint inventor, and thus within the meaning of “whoever invents,” as long as he contributes to the conception of the invention, even if he does not conceive of the *entire* invention. *Vanderbilt Univ. v. ICOS Corp.*, 601 F.3d 1297, 1303 (Fed. Cir. 2010); *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1359 (Fed. Cir. 2004). It follows, then, that “whoever . . . uses” a process for the purposes of infringement covers multiple parties who act in concert to collectively perform the claimed process, even though they may not individually practice each step.

The majority gives little consideration to the text of the statute, relegating its discussion of “whoever” to a footnote. It does not consider principles of statutory

construction or attempt to reconcile its construction with the other uses of “whoever” in the same statute. The majority posits that the fact that whoever is plural means only that more than one entity can be liable for patent infringement. This construction assigns no weight to the plural form because the same would be true if the singular were used. For example, if the statute read “*one* who uses” a patented invention, all would agree that two people performing each step of the patented process would each be liable for infringement. No one would claim that once the first person infringed, the second could not be liable for infringement. The majority’s construction makes no sense and is inconsistent with the statute’s use of “whoever” in 35 U.S.C. §§ 101, 161, and 171, which all undeniably reference joint inventors, meaning multiple parties acting together.

The plain language and contextual analysis compel the conclusion that “whoever” within the context of § 271(a) includes joint infringers—multiple entities acting in concert pursuant to a common plan or purpose (joint tortfeasors). Moreover, the presumption against ineffectiveness supports construing “whoever” to include joint infringement. If “language is susceptible of two constructions, one of which will carry out and the other defeat its manifest object, the statute should receive the former construction.” Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 63 (2012) (quoting *Citizen Bank of Bryan v. First State Bank*, 580 S.W.2d 344, 348 (Tex. 1979)) (alterations omitted). Construing “whoever” as the majority does creates a “gaping loophole” in our infringement law that sanctions infringing activity and “renders issued and future patents in important technologies virtually unenforceable.” AIPLA Amicus Brief at 9. *See also* Biotechnology Amicus Brief at 13 (“[B]oth common sense and the patent law’s purpose would be defeated if joint actors were allowed to divide up

the practice of a patented invention in circumvention of the patentee’s rights.”); Myriad Amicus Brief at 11 (“The Federal Circuit’s recent decisions on so-called ‘joint infringement’ have taken a restrictive approach and, in so doing, have created a loophole for would-be infringers.”); Damon Gupta, *Virtually Uninfringeable: Valid Patents Lacking Protection Under the Single Entity Rule*, 94 J. PAT. & TRADEMARK OFF. SOC’Y 61, 68, 74 (2012) (explaining that the Federal Circuit’s single entity rule “has created an incongruous result—some patents are virtually uninfringeable. . . . This creates a loophole where a defendant can collaborate with others to collectively perform every step of the patented process and avoid liability for infringement.”).

For example, consider the following scenario. Party *A* intentionally induces party *B* to perform each and every step of a method claim. Unquestionably, party *B* is a direct infringer under § 271(a) and party *A* is an inducer under § 271(b). Switching the facts only slightly, assume that party *A* performs the first step in the claimed method and then, with the same knowledge and intent, induces party *B* to perform the remaining steps. Under the majority’s rule, neither party is liable, even though the harm to the patentee remains the same. Party *A* is not even liable as an inducer because, under the single entity rule, no direct infringement has occurred. *Limelight*, 134 S. Ct. at 2117 (“[W]here there has been no direct infringement, there can be no inducement of infringement.”). To apply the majority’s construction “would be rendering the law in a great measure nugatory, and enable offenders to elude its provisions in the most easy manner.” *The Emily & the Caroline*, 22 U.S. (9 Wheat.) 381 (1824) (Thompson, J.). Indeed, the Supreme Court recognized that the loophole may have arisen from “the possibility that the Federal Circuit erred by too narrowly circumscribing the scope of § 271(a).” *Limelight*, 134 S. Ct. at 2119.

The majority claims that this gaping hole in liability, which the majority never defends, and which all agree makes no sense, was “Congress’ deliberate choice.” According to the majority, “Congress carefully crafted subsections (b) and (c)” and intentionally “removed joint-actor patent infringement liability.” Maj. at 10–11. The majority recognizes that “[a]t the time, the common law contained myriad other theories of infringement, such as, for example, those in *Peerless* and *Solva*. In enacting § 271(b) and (c), Congress cleared away the morass of multi-actor infringement.” Maj. at 11 (full cites omitted).¹ It has been generally understood that with regard to infringement, the 1952 Patent Act was not meant to make sweeping changes to the scope of liability, but rather to codify existing infringement liability and restore notions of infringement which had been curtailed by the Supreme Court’s decisions in *Mercoïd Corp. v. Mid-Continent Investment Co.*, 320 U.S. 661 (1944), and *Mercoïd Corp. v. Minneapolis-Honeywell Regulator Co.*, 320 U.S. 680 (1944).

The majority never explains why Congress would intentionally do away with joint infringement liability and create what is universally recognized as a gaping hole in liability. No party or amici defends as logical the rule

¹ Even amici who suggest that § 271(a) does not include joint infringement admit that such a result was likely never intended by Congress. *See, e.g.*, Brief of Amicus Curiae United States at 14, *Limelight*, 134 S. Ct. 2111 (No. 12-786) (“As a matter of patent policy, there is no obvious reason why a party should be liable for inducing infringement when it actively induces another party to perform all the steps of the process, but not liable when it performs some steps and induces another party to perform the rest. . . . The statutory gap is unfortunate.”) (“US Amicus Brief”).

which the majority says Congress intentionally adopted: that when one induces another to perform the steps of a patented method both parties are liable; however, when one performs some of the steps and induces another to perform the remaining steps, nobody is liable. The harm to the patentee is identical in either case—the entire method has been performed—and the joint tortfeasors have received the economic benefit of that patented method.

The majority’s primary criticism of interpreting “whoever” in § 271(a) to include joint infringers is that doing so would render §§ 271(b) and (c) superfluous. This is simply wrong. Sections 271(b) and (c) would still apply in situations where § 271(a) would not. AIPLA Amicus Brief at 17–20. Consider the same scenario discussed previously—where one party induces another to perform all steps of a claimed method. That party has undisputedly infringed under § 271(b). It is not, however, liable for direct infringement under § 271(a) because it has not performed any step of the claimed method. Section 271(a), by its own terms, does not apply to an entity that does not perform any step of a patented method, because that party would not be one of the person or persons who jointly “uses” the method within the meaning of the statute.² See *NTP, Inc. v. Research In Motion, Ltd.*, 418

² It is an unassailable truism that an entity who does not perform any method steps is not using the method, not individually and not jointly. The majority also claims that this unremarkable definition of “use” would be at odds with common law tort principles because it would exclude inducers who encourage another’s use without themselves performing steps. But isn’t this exactly what Congress did cover in § 271(b)? I am not sure how Congress’ choice to divide joint tortfeasor acts giving rise to

F.3d 1282, 1318 (Fed. Cir. 2005) (“Because a process is nothing more than the sequence of actions of which it is comprised, the use of a process necessarily involves doing or performing each of the steps recited.”); *see also* AIPLA Amicus Brief at 18 (“Section 271(a) does not apply to an entity that performs no steps of a patented method.”); *Bauer & Cie v. O’Donnell*, 229 U.S. 1, 10–11 (1913) (“The right to use is a comprehensive term and embraces within its meaning the right to put into service any given invention.”). As this example demonstrates, §§ 271(b) and (c) are not at all rendered superfluous. The majority’s claim that I have “manufactured a single case” so as not to “render § 271(b) superfluous” is confusing. Sections 271(b) and (c) would continue to apply and be the exclusive avenue for liability where the inducer or contributor did not perform any of the steps themselves. Rather than being an off-the-mark single example, this example *is* the fact pattern of every §§ 271(b) and (c) case ever decided. No case ever decided under § 271(b) or (c) would come out differently, nor would any of those fact patterns give rise to § 271(a) liability, under my construction. Nothing is superfluous.

The plain language of § 271(a) and the accompanying sections of the Patent Act make clear that “whoever . . . uses” a process includes joint infringers just as “whoever invents” includes joint inventors. And despite the majority’s pronouncement, this standard is not limited to parties acting as part of a principal-agent relationship, a contractual arrangement, or a joint enterprise. The statutory language, the common law, and our case law are not so limiting. Joint infringement encompasses an infringer who performs some claim steps and directs or controls

liability among the three sections (a), (b), and (c) is “un-tenable.” Maj. at 9.

another to perform the remainder of the claimed process and it includes parties who act in concert to collectively perform the claimed process pursuant to a common plan, design, or purpose. Liability for such multi-actor joint infringement was present and widely recognized in the common law prior to the 1952 Patent Act, and continues to be present in § 271(a).

The majority suggests that its construction is correct despite the fact that it renders the use of “whoever” in the Patent Act internally inconsistent and without considering, or even admitting, that it creates a gaping hole in liability that had not previously existed in the common law. Instead, the majority claims that this was purposeful and intentional by Congress because, in 1952, Congress sought to do away with all commonly recognized forms of joint infringement except that codified in §§ 271(b) and (c). Section 271(a)’s use of “whoever” expressly includes joint infringement as §§ 101, 161, and 171’s use of “whoever” includes joint invention. The plain language of the statute indicates that Congress chose to divide joint tortfeasor acts giving rise to liability among the three sections (a), (b), and (c). This construction gives meaning to all the words in the statute, interprets the word “whoever” consistently, and reflects Congress’ codification of the state of liability for infringement prior to the creation of the 1952 Patent Act.

III. The Common Law Supports § 271(a) Joint Infringement Liability

The Supreme Court observed in *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342 (1961) that “§ 271(a) of the new Patent Code, which defines ‘infringement,’ left intact the entire body of case law on direct infringement.” The common law prior to the 1952 Patent Act recognized joint liability for patent infringement in a broader set of circumstances than

proposed today by the majority, such as where one party directs or controls the actions of another to infringe a patent, or where two parties act in concert to perform the claimed method steps pursuant to a common goal, plan, or purpose. As summarized by Robinson’s famous patent treatise, “[a]n act of infringement is committed by making, using, or selling the patented invention without authority from the owner . . . or by acting in complicity with others under any cover or pretence the practical effect of which is an invasion of the monopoly created by the patent. All who perform or who unite in the performance of an act of infringement, by any of these methods, may be sued jointly and severally.” 3 William C. Robinson, *The Law of Patents for Useful Inventions* § 946 (1890) (“Robinson”). Similarly, another treatise explained that “[w]hoever directs or requests another to infringe a patent, is himself liable to an action for the resulting infringement,” and “[w]here several persons co-operate in any infringement, all those persons are liable therefor as contributors thereto.” Albert H. Walker, *Textbook of the Patent Laws of the United States of America* (4th ed. 1904) (“Walker”).³

³ Joint infringement is *not* a “relatively new problem.” US Amicus Brief at 31; *see also id.* at 14 (“[T]he current provisions of Section 271 do not deal adequately with the relatively new phenomenon in which multiple parties collectively practice the steps of a patented method.”). From the earliest patent treatises throughout the legislative history of the 1952 Patent Act and continuing to the thousands of current patents whose claims are drafted to cover joint infringement, the practice of multiple parties acting in concert to perform the steps of a patented method has been known and cognizable. *See Walker, supra; Robinson, supra* (both acknowledging that

Several of the pre-1952 cases cited by the parties recognize joint infringement liability. In *York & Maryland Line Railroad Co. v. Winans*, the Supreme Court held that a company that owned the rails on which a different company operated infringing cars for both companies' profits was liable for infringement because it was "a principal, cooperating with another corporation, in the infliction of a wrong, and is directly responsible for the

if "several persons cooperate in any infringement" they are all liable); *Contributory Infringement: Hearings on H.R. 3866 Before Subcomm. No. 4 of the House Comm. on the Judiciary*, 81st Cong. 3 (1949) (statement of G. Rich) ("[W]hen two people combine and infringe a patent in some way or other, they are joint tortfeasors, and it so happens that patents are *often* infringed by people acting in concert, either specifically or by implication."); *Contributory Infringement in Patents: Hearings Before Subcomm. on Patents, Trade-marks, and Copyrights of the H. Comm. on the Judiciary*, 80th Cong. 5 (1948) (statement of G. Rich on behalf of the New York Patent Law Association) (arguing in favor of adoption of the 1952 Patent Act in order to establish liability where a patented method is performed by two or more persons acting in concert: "a new method of radio communication may involve a change in the transmitter and a corresponding change in the receiver. To describe such an invention in patent claims, it is necessary either to specify a new method which involves both transmitting and receiving, or a new combination of an element in the receiver and an element in the transmitter . . . The recent decisions of the Supreme Court appear to make it impossible to enforce such patents in the usual case where a radio transmitter and a radio receiver are owned and operated by different persons."). Joint infringement is not a new problem nor is it one that escaped Congress' attention in 1952.

resulting damage.” 58 U.S. 30, 40 (1854). Similarly, in *Jackson v. Nagle*, a contractor that performed certain infringing steps and a subcontractor that performed the remaining infringing steps were held liable as “joint infringers.” 47 F. 703 (C.C.N.D. Cal. 1891).⁴ See also *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712, 721 (6th Cir. 1897) (“An infringement of a patent is a tort analogous to trespass or trespass on the case. From the earliest times, all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. . . . If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the constitution and laws of the United States to inventors is a poor sham.”); *New Jersey Patent Co. v. Schaeffer*, 159 F. 171, 173 (C.C.E.D. Pa. 1908) (“Where an infringement of a patent is brought about by concert of action between a defendant and complainants’ licensee, all engaged directly and intentionally become joint infringers.”); *Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (If, “in actual concert,” one party consents to manufacture a first part of a claimed combination, and another party makes the second part, both “are tort-feasors, engaged in a common purpose to

⁴ The majority discounts *Jackson* and other pre-1952 cases on the basis that they did not deal with method claims. The language of the patent statute draws no distinctions between method and machine claims to indicate that Congress intended joint tortfeasor concepts to be incorporated into infringement liability when machine claims are at issue, but not when method claims are at issue. These cases indicate that concerted action amounted to joint infringement and was actionable at the time.

infringe the patent, and actually, by their concerted action, producing that result.”).

Two other pre-1952 cases from the Seventh Circuit confirm the understanding that the concerted actions of two different parties can result in direct infringement of a method claim. In *Peerless Equipment Co. v. W. H. Miner, Inc.*, the defendant manufacturer performed all but the last step of the claimed method, which was performed by the defendant’s customer. 93 F.2d 98, 105 (7th Cir. 1937). Despite the divided infringement scenario, the Seventh Circuit found the defendant liable for contributory infringement. *Id.* Similarly, in *Solva Waterproof Glue Co. v. Perkins Glue Co.*, the defendant was held liable for contributory infringement where the defendant’s customer performed one step of the two-step process. 251 F. 64, 73 (7th Cir. 1918). For the defendants in both cases to be liable for contributory infringement, there must have been some underlying direct infringement. *Limelight*, 134 S. Ct. at 2117 (“[O]ur case law leaves no doubt that inducement liability may arise ‘if, but only if, [there is] . . . direct infringement.”) (quoting *Aro*, 365 U.S. at 341). This requirement existed before the 1952 Patent Act. *Aro*, 365 U.S. at 341 (“It is plain that § 271(c)—a part of the Patent Code enacted in 1952—made no change in the fundamental precept that there can be no contributory infringement in the absence of a direct infringement.”). *Peerless* and *Solva* implicitly—but necessarily—held that two parties’ performance of different steps of the claimed methods constituted direct infringement of those methods.

Certainly, some of the pre-1952 principles and cases cited above are more akin to what we today consider to be indirect infringement rather than direct infringement under § 271(a). But they all gave rise to liability and the 1952 Patent Act codified all of them. In §§ 271(b) and (c), it codified certain grounds for induced and contributory infringement. And in § 271(a), by using the plural term

“whoever,” it codified the common law rule that two parties who act in concert pursuant to a common plan or design to perform a claimed method are liable for joint infringement.

Interpreting § 271(a) to allow for infringement by the concerted action of multiple parties is consistent with general common law principles of tort liability. The common law imposed joint liability when two or more parties acted in concert—alternatively referred to as concerted action or acting with another in pursuit of a common plan, design, or purpose—even without an agency relationship or contractual obligation. “One is subject to liability if he . . . does a tortious act in concert with [an]other pursuant to a common design with him.” Restatement (Second) of Torts § 876(a); *see also* 1 Edwin A. Jaggard, *Hand-book of the Law of Torts* § 67 (“[J]oint tortfeasors are held responsible, not because of any relationship existing between them, but because of concerted action toward a common end. . . . All persons who aid, counsel, direct, or join in committing a tort are joint tortfeasors.”). Indeed, the common law imposed liability for harm resulting from multiple parties even if the individual acts of each party were not tortious. *Prosser & Keeton on Torts* § 52 (“A number of courts have held that acts which individually would be innocent may be tortious if they thus combine to cause damage.”); Fowler Vincent Harper, *A Treatise on the Law of Torts* § 302 (1933) (“Harper”) (“Joint liability in tort may be imposed in three types of situations: (1) where the actors concur in the performance of the tortious act or acts; (2) where, although there is no joint action, nevertheless the independent acts of several actors concur to produce harmful consequences; and (3) where by reason of some special relationship between the parties, joint liability is imposed.”). The agreement to act in concert can be express, implied, or a tacit understanding. *Prosser & Keeton on*

Torts § 46 (“Express agreement is not necessary, and all that is required is that there be a tacit understanding.”); *Akamai*, 692 F.3d at 1349 (Linn, J., dissenting) (agreement can be express or implied); Restatement (Second) of *Torts* § 876(a), cmt. a (“The agreement need not be expressed in words and may be implied and understood to exist from the conduct itself.”).

And while the post-1952 precedent is not a model of clarity on the circumstances in which concerted action or joint infringement creates liability under § 271(a), courts frequently recognized liability under § 271(a) in joint tortfeasor scenarios, not limited to vicarious liability. *See, e.g., On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1344–45 (Fed. Cir. 2006) (approving district court’s jury instruction that “[i]t is not necessary for the acts that constitute infringement to be performed by one person or entity. . . . Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.”); *Hill v. Amazon.com, Inc.*, No. 2:02-cv-186, 2006 WL 151911, at *2 (E.D. Tex. Jan. 19, 2006) (“In the absence of an agency or contractual relationship, the case law appears to require a showing that the defendant and the third party are connected at least to the extent that the defendant must actually direct the third party to perform the remaining steps of the method.”); *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980) (“Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method.”), *aff’d*, 667 F.2d 1232 (5th Cir. 1982); *see also Freedom Wireless Inc. v. Boston Commc’ns Grp., Inc.*, No. 06-1020, slip op. at 2–3 (Fed. Cir. Dec. 15, 2005) (noting district court’s finding direct infringement under § 271(a) on a

theory of joint infringement where two different companies acted in concert to perform all the method steps and instructing the jury: “if separate companies work together to perform all of the steps of a claim of a patent, the companies are jointly responsible, that is, responsible as a group for the infringement of the patent. Even if no single company performs all of the steps of a claim, the companies are jointly responsible.”); *Applied Interact, LLC v. Vt. Teddy Bear Co.*, No. 04 Civ. 8713, 2005 WL 2133416, at *4 (S.D.N.Y. Sept. 6, 2005) (adopting a “some connection,” not a vicarious liability, standard among joint infringers); *Marley Mouldings Ltd. v. Mikron Indus., Inc.*, No. 02 C 2855, 2003 WL 1989640, at *3 (N.D. Ill. Apr. 30, 2003) (denying summary judgment of noninfringement where parties collectively performed all method steps and holding that “[a] party cannot avoid infringement merely by having another entity perform one or more of the required steps when that party is connected with the entity performing one or more of the required steps”); *Cordis Corp. v. Medtronic AVE, Inc.*, 194 F. Supp. 2d 323, 350 (D. Del. 2002), *rev’d on other grounds*, 339 F.3d 1352 (Fed. Cir. 2003) (finding sufficient evidence to support finding that there was “some connection” between two parties jointly performing method claim); *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999) (recognizing that “a party [may be] liable for direct infringement of a process patent even where the various steps included in the patent are performed by distinct entities” if there is “some connection between the different entities”); *Mobil Oil Corp. v. W.R. Grace & Co.*, 367 F. Supp. 207, 253 (D. Conn. 1973) (holding that Grace directly infringed despite the fact that its customers performed one of the claimed steps because “defendant, in effect, made each of its customers its agent in completing the infringement step knowing full well that the infringement step would in fact be promptly and fully completed by

those customers”); *Metal Film Co. v. Metlon Corp.*, 316 F. Supp. 96, 110–11 (S.D.N.Y. 1970) (holding defendant could not avoid direct infringement by having an outside supplier perform one of the method steps). *But see Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291–92 (9th Cir. 1974) (expressing doubt over the possibility of divided infringement liability).

IV. Applying the Statutory Interpretation to this Case

Limelight is liable under § 271(a) for its actions and the actions of its customers in infringing the '703 patent. First, Limelight is liable under the direction or control test, because Limelight has performed a number of steps of the patented methods, and it has directed its customers to perform the remaining steps. Limelight is not an innocent party who performed a single step. It is the mastermind of the infringement in this case. It performed all but one of the claim steps and it instructed, in fact it required, its customers to perform the other claim step before they could use Limelight's content delivery system. Such a person, personally responsible for the performance of every claim step, has always been deemed an infringer under the law. In these circumstances, Limelight “uses” the patented method. Every time Limelight's customers act, pursuant to its instruction to use its content delivery system, infringement is occurring. All of Akamai's invention is used, all the claimed method steps are performed, and all the economic benefit of Akamai's innovation is stolen. And Limelight is the one who profits from this infringement. Limelight is using Akamai's patented invention and is responsible for the performance of every patented step.

Limelight could also be held liable as a joint infringer, acting in concert with the customers pursuant to a common purpose, design, or plan. Limelight and its content provider customers share a common purpose, design, or

plan: to provide website information to Internet users. Limelight knowingly works together with its customers to achieve that result, jointly performing all the steps of the patented method and receiving exactly the economic benefit secured by the patent. Limelight's service improves content delivery to Internet users, offering its customers faster, more efficient delivery of tagged content coupled with control and flexibility over untagged content. A jury has found that all of the steps of the claims at issue are performed by the collective actions of Limelight and its customers. And these steps are performed in concert pursuant to contract.

Limelight requires all of its customers who wish to use its service to sign a standard contract delineating the actions that customers must perform to use the Limelight service—actions that include steps of the patented method. The fact that Limelight did not tell its customers what website content to tag is irrelevant to infringement of the claims at issue, which do not discriminate among tagged content. It is true that the contract does not compel the customer to use Limelight's service. But if the customer does choose to use Limelight's service to deliver content, it must perform some of the claimed method steps, and thus acts in concert with Limelight. *The fact that a customer may choose not to act in concert with Limelight does not insulate Limelight from liability when that customer actually chooses to do so.*

The Constitution and 35 U.S.C. § 154 grant patentees the right to exclude others from using the patented invention in the United States. Akamai was undoubtedly harmed—its entire patented process was used by others for commercial gain all in the United States. This harm is identical whether Limelight performed all the steps or collaborated with its customers to divide them up. Limelight benefitted from the infringing use by selling its services, which provided exactly the faster, more efficient

content delivery system invented by Akamai. Limelight knowingly performed each step except the tagging step, and it knew that its customers would perform that tagging step. Its content delivery system would not work unless the customer performed the tagging step. In fact, the contract it had with its customers required them to perform that tagging step if they used the Limelight service. Every step of the patented method was performed and Limelight and its content provider customer achieved exactly the economic benefit conferred by the patent without having to pay a royalty for its use. Under common law joint tortfeasor principles, Limelight's conduct traditionally gave rise to liability. Under common law patent principles, this conduct traditionally gave rise to liability. For centuries, up until our recent decisions, Limelight would have been liable for patent infringement. And the majority makes no argument that Limelight should not be held liable.

V. Responding to the Majority

The majority's creation of a narrow patent-specific universe of joint infringement liability construes the Patent Act in ways that are both internally inconsistent and inconsistent with general tort principles.⁵ Section 271(a) covers joint infringement, including situations which give rise to joint tortfeasor liability. It includes liability for a tortfeasor like Limelight who performed all the method steps but one and then directed its customers to perform the final step. The direction or control stand-

⁵ Interestingly, the majority's joint enterprise standard is more akin to joint tortfeasor than agency. It is discussed as a form of "vicarious liability." However, like other forms of joint tortfeasor liability and unlike agency or contract obligation, it creates joint and several liability among the participants of the joint enterprise.

ard was not limited to situations where there was vicarious liability at common law and there is no reason to read such a limitation into § 271(a). Similarly, the common law does not limit concerted action to instances where parties are acting in furtherance of an agency relationship, contractual obligation, or joint enterprise. See *Prosser & Keeton on Torts* § 46; Restatement (Second) of Torts § 876; Harper § 302.

The majority cites a number of treatises for the proposition that mere knowledge of another's tortious activity is not enough to give rise to liability. I agree. Joint tortfeasor liability requires concerted action pursuant to a common plan, purpose, or design. Joint tortfeasors are both *acting* to create a single indivisible harm. I agree with the majority that just knowing that someone else is acting (when you yourself do nothing) does not subject you to liability.

And importantly, I am not importing a knowledge requirement into § 271(a) that would be incompatible with the strict liability nature of the tort of infringement. There is no knowledge of the patent requirement under § 271(a) and neither my standard nor the majority's imports one. Both standards, however, do require knowledge to attribute the acts of one party to another. The majority's joint enterprise standard requires knowledge, in fact, an agreement between the parties and right of mutual control. Likewise, the joint tortfeasor standard requires knowledge. Neither requires knowledge of the patent or knowledge of the harm that will be caused. Rather, both adopt the common sense principle that a party cannot be held liable for the actions of another without knowing of that party's actions and some form of agreement or direction or control. Here there is no dispute that Limelight itself acted (performed all but one of the method steps) and knew precisely the actions its customers would take and, in fact, it instructed

them as to how to take those actions. This undoubtedly comports with any knowledge requirement under joint tortfeasor law that would attribute to Limelight those acts taken by its customers.

The majority criticizes the dissent for not incorporating into § 271(a) all joint tortfeasor scenarios. The answer is clear: not all joint tortfeasor scenarios are permissible under the language of § 271(a), and of course, the statute's language controls. For example, it is true that at common law the action of encouraging another to commit a tort (traditional notions of inducement) makes you a joint tortfeasor. And because such inducement is directly and undisputedly covered by § 271(b), this common law joint tortfeasor does not escape liability under § 271. However, that particular joint tortfeasor scenario does not likewise create liability under § 271(a) because the language of § 271(a) precludes it. Section 271(a) in relevant part says "whoever . . . uses . . . any patented invention." To be liable as a joint tortfeasor under § 271(a), all the elements or steps of the claim must be performed, and each accused joint tortfeasor must perform at least one of the steps pursuant to some common purpose, design or plan. If you perform none of the steps, you are not jointly using the patented invention, and thus are not a joint tortfeasor covered by § 271(a).

Akamai, the patentee, is harmed identically whether Limelight performed all of the method steps or whether Limelight performed three and had its customer perform the fourth. Under the majority's reading of the statute, the patentee has no redress for the harm if two people act together to perform the patented method but does have redress if that identical method is performed by a single entity. It is difficult for me to conceive of how that guarantees the patentee's right of exclusivity or compensates the patentee when that right of exclusivity is clearly violated. The majority claims that the dissent would

extend liability to independent arms-length actors who just happen to collectively perform the claimed steps. Not so. Concerted action pursuant to a common plan, purpose, or design requires that “[p]arties are acting in concert when they act in accordance with an agreement to cooperate in a particular line of conduct or to accomplish a particular result.” Restatement (Second) of Torts § 876, cmt. a. Such concerted action has occurred in this case. Limelight performed all but one step of that patented method and its customers, pursuant to a contract for Limelight’s services, performed the final step (tagging). Limelight and those customers had an express agreement that when Limelight’s content delivery system was used, the customers would tag content and Limelight would perform all the other steps—this is “an agreement to cooperate in a particular line of conduct or to accomplish a particular result.”

I have not “blithely tossed [common law principles of joint tortfeasor] aside.” Maj. at 23. The majority has created a straw man and in folly beat it down. But joint tortfeasor concerted action, according to a common plan, purpose, or design, is not that straw man. My interpretation of the Patent Act embraces the common law tort principles. There was liability for what Limelight did here prior to the 1952 Patent Act, and the Patent Act continues to give rise to liability for such infringement in § 271(a). I do not agree with the majority that Congress intentionally sought to do away with such liability, and the plain language of the statute does not comport with such claims.

The majority’s complaints about predatory customer suits are a smokescreen. Maj. at 24. The only accused infringer in this case is Limelight. We do not, and need not, decide whether Limelight’s customers should be

liable, as none of those customers have been sued by Akamai.⁶

The majority’s concern that joint tortfeasor liability will cause a “drastic expansion of predatory customer suits” is unwarranted. Maj. at 24. The majority’s dramatic rhetoric is meant to appeal to the frenzy over “trolls.” Concerns about customer suits stem from the fact that patentees might choose to sue less sophisticated customers who lack the resources or incentive to defend against the patent suit, while the manufacturers, who generally have a greater interest and ability to defend against the suit, cannot participate in the lawsuit. See, e.g., *Microsoft Corp. v. DataTern, Inc.*, 755 F.3d 899, 904–907 (Fed. Cir. 2014) (prohibiting Microsoft’s declaratory judgment action despite the fact that the patentee sued over 100 customers).

These concerns do not exist in the joint tortfeasor context because if a customer were ever sued, the manufacturer can be joined voluntarily (or even involuntarily). Where it is the combined actions of the customer and manufacturer pursuant to a common plan that give rise to liability, if the customer is sued, the manufacturer can

⁶ While not deciding whether Limelight’s customers could be liable, the Supreme Court has stated that “[t]he right to use is a comprehensive term and embraces within its meaning the right to put into service any given invention.” *Bauer*, 229 U.S. at 10–11. And we note that a system claim is infringed by an end-user when “the system is put into service,” regardless of whether the end-user possesses or made the system. *Centillion Data Sys., LLC v. Qwest Commc’ns Int’l, Inc.*, 631 F.3d 1279, 1284–85 (Fed. Cir. 2011); *NTP*, 418 F.3d at 1317.

join and defend against the suit.⁷ Once joined, the manufacturer could secure a judgment that would resolve suits as against all its customers. If the manufacturer secures a judgment against the patentee, the patentee could be collaterally estopped from bringing any other customer suits. If the patentee is successful against the manufacturer and recovers damages, it cannot separately recover damages from the customers who use that product. *Glenayre Elecs., Inc. v. Jackson*, 443 F.3d 851, 864 (Fed. Cir. 2006) (“[A] party is precluded from suing to collect damages for direct infringement by a buyer and user of a product when actual damages covering that very use have already been collected from the maker and seller of that product.”). The law is clear: if the patentee recovers damages from Limelight here, it cannot later recover damages from any customers of Limelight; there is no double dipping.

Finally, to do either what the majority proposes or what I propose requires en banc action, as it is admittedly at odds with binding precedent. Despite mentioning the joint enterprise standard twelve times in the opinion and concluding that the collaborative actions of Limelight and its customers do not give rise to joint enterprise liability,⁸

⁷ And if a customer were found liable (such as Limelight’s content provider customers), that customer would only be jointly and severally liable for the single act of infringement that it performed in concert with Limelight. Only the manufacturer, Limelight, is liable for the harm caused by all of the uses of its software.

⁸ It is troubling that the majority articulates a new standard for liability, joint enterprise, which is in conflict with our prior precedent and then decides this factual question on appeal, with no opportunity for briefing, argument, or record development by the parties. “Whether [the joint enterprise] elements exist is frequently a

the Majority claims that it is not adopting joint enterprise liability. It is not, and cannot adopt the joint enterprise standard, because one panel cannot overrule a prior panel decision. Our opinion in *Golden Hour Data Systems, Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1371, 1380–81 (Fed. Cir. 2010) found no liability where two defendants “formed a strategic partnership, enabled their two programs to work together, and collaborated to sell the two programs as a unit” that practiced all of the claimed method steps. The jury had found infringement under the direction or control test in *Golden Hour*, our court held that those circumstances, the very same ones that would qualify for joint enterprise, do not give rise to liability. *Id.* at 1381. And Judge Linn’s dissent in *Akamai*, which was joined by Judge Prost, correctly explained: “Because the parties in [*Golden Hour*] would have satisfied the test for joint enterprise based on common purpose and an equal right of mutual control, . . . the en banc court should expressly overrule the holding in that case.” *Akamai*, 692 F.3d at 1349 (Linn, J., dissenting).

* * * * *

Congress codified existing common law joint tortfeasor principles in §§ 271(a), (b), and (c). Section 271(a) covers direct infringement, which occurs when all the steps of the method are performed either by a single entity or multiple entities acting in concert or collaboration, jointly, or under direction or control. This does not extend to arms-length actors who unwittingly perform a single step—there must be concerted action to achieve a common goal. The plain language of § 271(a), and in particular Congress’ decision to make liable “whoever . . . uses . . . any patented invention,” expressly includes joint

question of fact for the jury.” Restatement (Second) of Torts § 491, cmt. c.

tortfeasor concerted action. To conclude otherwise renders the statute's use of the word "whoever" internally inconsistent. There is no question that §§ 101, 161, and 171, which state "whoever invents," includes the concerted action of multiple inventors each playing a part in the conception of the patented invention. Likewise "whoever uses" includes the concerted action of multiple parties each playing a part in using the patented process. The majority's single entity rule is judicial fiction which upsets the settled expectations of the inventing and business community. I respectfully dissent from the majority's construction which is inconsistent with the plain language of the statute, renders the statute internally inconsistent, and creates a gaping hole in infringement which no one even attempts to justify.