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After O2 Micro: The Court's Evolving Duty to Map Words to Things

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AFTER O2 MICRO: THE COURT'S EVOLVING DUTY TO MAP WORDS TO THINGS

Peter E. Gratzinger[†]

One of the central conundrums of patent law is how to map words to things. Since Markman, and the Federal Circuit's decision in O2 Micro, it has been the duty of the court to resolve disputes over the scope of patent claims. Yet trial courts take very different approaches to discharging this duty. For example, some will provide constructions for dozens of claim terms, while others will determine that all but a few should be given their "plain meaning" by the jury. This Article discusses developments in Federal Circuit authority regarding the substantive and procedural duty of district courts to resolve disputes over claim scope. It argues that courts should read O2 Micro as a mandate to take an active role in ensuring that trial outcomes are grounded in protecting what the inventor actually invented.

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INTRODUCTION

"[T]hat's for y'all to fight over and for the jury to resolve." So ruled an Eastern District of Texas Magistrate when a dispute arose over the meaning of "an" and "said" in a patent claim. According to the Federal Circuit, the ruling was reversible error. The Federal Circuit held in an unpublished disposition that the trial court had a duty to resolve the claim construction dispute rather than allowing the lawyers to each argue their own theory of the meaning of the claim to the jury. The Federal Circuit's decision cited to the Federal Circuit's seminal case in *O2 Micro*, which held that "[w]hen the parties raise an actual dispute regarding the proper scope of [asserted] claims, the court, not the jury, must resolve that dispute."

Yet despite this seemingly simple premise, there is wide variation in how district courts interpret and implement the duty to resolve claim construction disputes. A striking example of this variation can be seen in the way that two different district court judges in the District of Nevada handled two parallel patent infringement actions filed by the same patent owner, Unwired Planet LLC.

In the first case against Google Inc., the district court construed the claims of five patents.⁵ Unwired Planet argued that many terms

^{1.} Creative Internet Advert. Corp. v. Yahoo!, Inc., 689 F. Supp. 2d 858, 862 (E.D. Tex. 2010).

^{2.} *Id*.

^{3.} *Id*.

^{4.} O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1360 (Fed. Cir. 2008).

^{5.} Unwired Planet, LLC v. Google Inc., No. 3:12-CV-00504-MMD, 2014 WL 7012497, at *1 (D. Nev. Dec. 12, 2014). The author is counsel of record for Google, Inc. in this matter, from which an appeal is pending.

had a "plain meaning" and required no construction. The district court disagreed, holding that *O2 Micro* required it to construe claims when the scope is in dispute. The district court provided constructions for all twenty-two terms submitted by Google for construction. Ultimately, Unwired Planet stipulated that it could not prove infringement of any of the five patents at issue under the district court's constructions—including the constructions of the terms for which it had advocated a "plain meaning" construction.

Unwired Planet's lawsuit against Square before a different judge in the same district took a very different trajectory. Square sought construction for sixteen terms from three patents, roughly in proportion to Google's request to construe twenty-two terms across five patents. The district judge in the *Square* case, however, cited *O2 Micro* for the proposition that "a district court is not obligated to construe terms with ordinary meanings, lest trial courts be inundated with requests to parse the meaning of every word in the asserted claims." The district judge agreed with Unwired Planet that only two of sixteen terms submitted by Square needed construction, and that the remainder are "best given their ordinary meanings." Unlike the *Google* case, this result was apparently not dispositive. The parties continued to litigate until the proceedings were ultimately stayed in favor of Covered Business Method review by the Patent Trial and Appeals Board.

It is apparent, therefore, that while the key principle of *O2 Micro* may be clear, district courts vary widely in their views of how to put it into effect. Two key questions frequently arise in district court litigation regarding the duty to construe claim terms: (1) when (if ever) can a construction of "plain meaning" satisfy the trial court's duty under *O2 Micro*, and (2) when (if ever) is it simply too late to ask the trial court to step in?

^{6.} Id. at *16, *22, *30.

^{7.} *Id*.

^{8.} Id. at *1 & n.3.

^{9.} Unwired Planet, LLC v. Google Inc., No. 3:12-CV-00504-MMD, Dkt. No. 463 (D. Nev. Mar. 26, 2015).

^{10.} See Unwired Planet, LLC v. Square, Inc., No. 3:13-CV-00579-RCJ, 2014 WL 4966033 at *7 (D. Nev. Oct. 3, 2014)).

^{11.} *Id.* at *2 (citing O2 Micro, *supra* note 4.).

^{12.} Id. at *7.

^{13.} Unwired Planet, LLC v. Square, Inc., No. 3:13-CV-00579-RCJ, Dkt. No. 109 (D. Nev. Feb. 10. 2015).

Three recent Federal Circuit cases provide some guidance on these issues. In the first case, *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, the Federal Circuit held that the trial court failed to comply with *O2 Micro* by providing the jury with a "plain meaning" construction, and held that under the correct construction, no reasonable jury could have found infringement. ¹⁴ Circuit Judge Bryson dissented, arguing that the trial judge correctly resolved the dispute between the parties by rejecting the defendants' narrow proposed construction in favor of "plain meaning." ¹⁵

In the second case, *Nuance Communications, Inc. v. ABBYY USA Software House, Inc.*, the Federal Circuit appeared to suggest that it was not error for the trial court to leave the scope of the claim to a jury, where the party seeking a clarification of claim scope had earlier asked for and obtained a "plain meaning" construction. ¹⁶

In the third case, *GPNE Corp. v. Apple, Inc.*, the Federal Circuit held that even two weeks into trial, it was not too late for the patent owner to ask the trial court to further construe a claim term, but that the trial court did not violate *O2 Micro* when it refused to do so, because the original construction gave adequate guidance to the jury.¹⁷

This Article takes a closer look at the duty of courts to resolve disputes over patent scope, in theory and in practice. The first part frames the judge's duty to resolve disputes over claim scope within the broader academic literature about patent law's central conundrum of mapping words to things. The second part provides background on the two touchstone cases regarding the duty to construe: the Supreme Court's decision in *Markman* and the Federal Circuit's decision in *O2 Micro*. The third part addresses Federal Circuit authority regarding the adequacy of "plain meaning" constructions to resolve the parties' disputes, up through the recent *Eon Corp*. decision. The fourth part addresses Federal Circuit authority regarding procedural limits on the trial court's duty, up through the Federal Circuit's recent decision in *GPNE*.

^{14.} Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc., 815 F.3d. 1314, 1319 (Fed. Cir. 2016).

^{15.} Id. at 1329 (Bryson, J. dissenting).

^{16.} Nuance Commc'ns, Inc. v. ABBYY USA Software House, Inc., 813 F.3d 1368, 1372-73 (Fed. Cir. 2016).

^{17.} GPNE Corp. v. Apple Inc., 830 F.3d. 1365, 1372-73 (Fed. Cir. 2016).

I. THE DIFFICULTY OF MAPPING WORDS TO THINGS

The practice of patent law is often a prolonged wrangle over the meaning of seemingly simple words and phrases. The disputes center on the patent claim, a formal legal writing which is supposed to put the public on notice of the "metes and bounds" of the claimed invention. The pivotal role played by a formal legal writing makes patent litigation quite unlike other types of intellectual property litigation.

In a copyright infringement trial, for example, a jury directly compares one recording to another, or a book to a screenplay. The jury is instructed to compare the "original expression" in one work to determine if it is "substantially similar" to the other. ¹⁹ There is no instrument, written by a lawyer, accompanying each copyright registration to explain the outer boundaries of the creative expression embodied in the work. Thus, the jury must exercise its own judgment and reach its own conclusions about how much similarity is too much. ²⁰

In a trade secret misappropriation trial, the jury will be presented with the defendant's conduct—for example, the customer list copied from the server two days before resignation or the phone calls to customers the following week—and be asked to make a judgment about whether the defendant had misused something secret and valuable in violation of a duty. There may be efforts to crystallize the alleged trade secrets prior to trial, for example through contention discovery, or in California, through disclosures under section 2019.210 of the Code of Civil Procedure Section.²¹ Ultimately, however, the jury will not be comparing the defendant's product to a preexisting legal instrument that defines the metes and bounds of the trade secret. Instead, the jury will be making judgments—about duty, breach, secrecy, economic value—that are often difficult to extricate from one another.

^{18.} See, e.g., In re Rosuvastatin Calcium Patent Litig., 703 F.3d 511, 536 (Fed. Cir. 2012) ("The claims of a validly-issued patent serve an important notice function, alerting the public of the metes and bounds of an inventor's discovery.").

^{19.} See, e.g., Funky Films, Inc. v. Time Warner Entm't Co., L.P., 462 F.3d 1072, 1077 (9th Cir. 2006).

^{20.} *Id.* at 1077 ("the intrinsic test [for substantial similarity], which examines an ordinary person's subjective impressions of the similarities between two works, is exclusively the province of the jury.").

^{21.} See Cal. Code Civ. Pro. § 2019.210.

The goal of a patent trial is to determine whether the defendant is using the plaintiff's original invention. In this respect, it is not very different from the goal of a copyright infringement trial, which is to determine whether the defendant is using the plaintiff's original expression. But the jury in a patent trial is not asked to compare the plaintiff's novel gizmo with prior art that lacks the inventive feature and with the defendant's knock-off that allegedly includes it. Instead, the jury is asked to perform a mechanical comparison of the defendant's product with a highly stylized paragraph of text written by a lawyer or patent agent, like the following paragraph that was the claim at issue in *O2 Micro*:

A DC/AC converter circuit for controllably delivering power to a load, comprising an input voltage source; a first plurality of overlapping switches and a second plurality of overlapping switches being selectively coupled to said voltage source, said first plurality of switches defining a first conduction path, said second plurality of switches defining a second conduction path; a pulse generator generating a first pulse signal; a transformer having a primary side and a secondary side, said primary side selectively coupled to said voltage source in an alternating fashion through said first conduction path and, alternately, through said second conduction path; a load coupled to said secondary side of said transformer; and a feedback control loop circuit receiving a feedback signal indicative of power being supplied to said load, and adapted to generate a second signal pulse signal for controlling the conduction state of said second plurality of switches only if said feedback signal is above a predetermined threshold; and drive circuitry receiving said pulse signal and controlling a conduction state of said first and second plurality of switches based on said first and second pulse signals, wherein, said drive circuitry alternating the conduction state of said first and second plurality of switches, controlling the overlap time of the switches in the first plurality of switches, and controlling the overlap time of the switches in the second plurality of switches, to couple said voltage source to said primary side.²²

A patent claim like the one above simply describes a thing, or sometimes, a series of steps. It typically contains no clues about which elements or steps are new and which are conventional. It includes no explanation of how the item described is an improvement on its predecessors. It is about as lifeless a piece of prose as can be written. And for the jury that must determine infringement, the task is

supposed to be blinkered: Does the accused product include each and every of the elements of the claim, or did it not?²³ Is the accused converter circuit "adapted to generate a second signal pulse signal for controlling the conduction state of said second plurality of switches only if said feedback signal is above a predetermined threshold,"²⁴ or is it not?

The jury need not know anything about what the patentee *invented* to determine if the patent claim is infringed. The patent *specification*, of course, typically includes discussion of what the inventor contributed to the art. But, as discussed further below, interpreting claim scope in light of the specification is the job of the judge, not the jury. ²⁵

Disputes over validity, and particularly obviousness, can sometimes breathe more life into the question of what the inventor actually contributed to the art. The Supreme Court has warned against an overly rigid approach to obviousness, holding that "rules that deny factfinders recourse to common sense" are "neither necessary under our case law nor consistent with it." Nonetheless, a central component of proving anticipation or obviousness is an exercise in box-checking a list of limitations in a patent claim as compared to one or more prior art references, an exercise not so different from the infringement analysis. ²⁷

Some commentators see this mode of resolving patent infringement disputes as fundamentally flawed. Dan Burk and Mark Lemley have argued that the uncertainty of patent scope prior to claim construction (and thereafter, given the high rates of reversal) show that the current conceptual model "isn't working" and that "it may simply be impossible to cleanly map words to things."²⁸ The authors suggest abandoning the idea of "peripheral claiming," where the

^{23.} See, e.g., Nazomi Commc'ns, Inc. v. Arm Holdings, PLC, 403 F.3d 1364, 1372 (Fed. Cir. 2005) ("[O]nce the claims are construed, infringement is assessed by comparing the accused device to the claims, and the accused device infringes if it incorporates every limitation of a claim, either literally or under the doctrine of equivalents.").

^{24.} Id

^{25.} Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996).

^{26.} KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 421 (2007).

^{27.} See e.g., Allergan, Inc. v. Apotex Inc., 754 F.3d 952, 958 (Fed. Cir. 2014) (anticipation requires showing that "a single prior art reference discloses each and every limitation of the claimed invention," and obviousness requires, inter alia, a comparison of "differences between the prior art and the claims at issue.").

^{28.} Dan L. Burke & Mark A. Lemley, Fence Posts or Sign Posts? Rethinking Patent Claim Construction, 157 U. P.A. L. REV. 1743, at 1745 (2009).

patent claim defines the outer boundaries of the inventor's legal rights, and moving toward a system of "central claiming," in which "the patentee discloses the central features of the invention—what distinguishes it from the prior art—and the courts determine how much protection the patent is entitled to by looking at the prior art that cabins the invention, how important the patentee's invention was, [] and how different the accused device is."²⁹ The patent infringement analysis, in Burk and Lemley's view, should be a more holistic and judgment-driven exercise, like copyright analysis.³⁰

Burk and Lemley see *O2 Micro* as a significant obstacle to achieving this new norm: "The legal rule that most complicates the process," they write, is the Federal Circuit's decision in *O2 Micro* "that every dispute over patent scope must be resolved as a matter of claim construction. . ". After *O2 Micro*, courts have no power to limit the scope of claim construction by passing the dispute to the jury, no matter how unambiguous the language of the claim might seem." The more that claim construction is a formalistic process in the hands of the judge, Burk and Lemley argue, the further away the process gets from types of judgment a jury must exercise in a copyright trial. "

"Central claiming," however, would require a radical rethinking of the modern patent system in the United States. Short of such a revolutionary change, perhaps it is possible to see *O2 Micro* as an opportunity rather than an obstacle to outcomes that fairly and predictably protect inventions. The judge, after all, is supposed to interpret claims "with *a full understanding of what the inventors actually invented* and intended to envelop with the claim." Thus, even if the jury must be blinkered in making an infringement determination, the judge need not be blinkered in interpreting the scope of the claim.

For example, in *Nuance Communications*, the plaintiff brought a dispute over claim scope to the attention of the court prior to trial.³⁵ The court was in a position to resolve the dispute over how to map

^{29.} Id. at 1746.

^{30.} Id. at 1774-76.

^{31.} Id. at 1754.

^{32.} Id.

^{33.} *Id*.

^{34.} Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998)) (emphasis added).

^{35.} Nuance Commc'ns, supra note 16, at 1372.

words to things with reference to the specification and "a full understanding of what the inventors actually invented and intended to envelop with the claim." The jury, in the end, was guided only by a tautological dictionary definition. The *Nuance* decision refrained from second-guessing the procedures of the trial court that, on their face, appeared to give ample opportunities to the plaintiff to make its case. Still, it does bear asking, at what cost?

Indeed, one might expect that a large proportion of infringement disputes could be resolved by the court without assistance from the jury. Certainly, some infringement disputes turn on disputes of fact, such as a case where infringement turns on a doctrine of equivalents analysis, ³⁸ or on the accused infringer's willful blindness in an indirect infringement case. ³⁹ But in many cases, the relevant facts about how the accused product works or how it is constructed are undisputed by the close of discovery.

O2 Micro appears to give Courts the authority to resolve many disputes over how words should be mapped to things, and by extension, many infringement disputes. Yet, as this Article shows, district courts can sometimes be reluctant to pick up those tools.

II. THE TOUCHSTONES OF THE COURT'S DUTY TO RESOLVE DISPUTES OVER CLAIM SCOPE: MARKMAN AND O2 MICRO

A. Markman v. Westview Instruments

In *Markman*, the Supreme Court held that "the construction of a patent, including terms of art within its claim, is exclusively within the province of the court." The Supreme Court began its analysis with the familiar rule that the right of trial by jury preserved by the Seventh Amendment is "the right which existed under the English common law when the Amendment was adopted." The Court found that "evidence of common-law practice at the time of the framing does not entail application of the Seventh Amendment's jury

^{36.} Id.

^{37.} *Id.* at 1373.

^{38.} Brilliant Instruments, Inc. v. GuideTech, LLC, 707 F.3d 1342, 1348 (Fed. Cir. 2013) (expert's "detailed application of the function-way-result test to the claim element and the allegedly equivalent feature of the accused product is sufficient to create a genuine issue of material fact for the jury to resolve.").

^{39.} Glob.-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754 (2011).

^{40.} Markman, supra note 25.

^{41.} *Id.* at 376 (quoting Baltimore & Carolina Line, Inc. v. Redman, 295 U.S. 654, 657 (1935)).

guarantee to the construction of the claim document." Thus, the Court turned to "existing precedent," "the relative interpretive skills of judges and juries," and "statutory policies" to determine how to allocate claim construction between judge and jury. ⁴³

Finding "no clear answers" in "history and precedent," the Court moved on to "functional considerations." According to the Court, "the construction of written instruments is one of those things that judges often do and are likely to do better than jurors unburdened by training in exegesis." Patent construction, the Court continued, "is a special occupation, requiring, like all others, special training and practice. The judge, from his training and discipline, is more likely to give a proper interpretation to such instruments than a jury; and he is, therefore, more likely to be right, in performing such a duty, than a jury can be expected to be." Finally, as to policy, the Court held that "uniformity in the treatment of a given patent" is an independent reason to "allocate all issues of construction to the Court."

In light of these holdings, the Supreme Court affirmed the decision of the Federal Circuit, which had affirmed the trial court's directed verdict based on the judge's determination that the accused product could not infringe the patent when properly construed.⁴⁸

B. O2 Micro v. Beyond Innovation

In *O2 Micro*, the Federal Circuit amplified the Supreme Court's holding in *Markman*, making clear that not only is the scope of claims within the province of the court, but that the court has an affirmative duty to resolve disputes over claim scope when they arise.

In the *O2 Micro* case, the defendant appealed a final judgment of infringement on the basis that it was legal error for the district court to fail to construe a limitation that the parties referred to as the "only if" limitation.⁴⁹ The limitation required a control loop circuit to control the conduction state of a switch "only if" a feedback signal was above

^{42.} Id. at 384.

^{43.} *Id*.

^{44.} *Id.* at 388.

^{45.} Id

^{46.} *Id.* at 388-89 (quoting Parker v. Hulme, 18 F. Cas. 1138, 1140 (C.C.E.D. Pa. 1849) (No. 10,740)).

^{47.} *Id.* at 371, 390.

^{48.} *Id.* at 391.

^{49.} O2 Micro, supra note 4, at 1354.

a predetermined threshold.⁵⁰ The parties disputed whether a person of ordinary skill in the art would have understood this limitation to apply at all times without exception, or only during the "steady state operation" of the switch.⁵¹ The defendant argued, for example, that the "only if" limitation was not satisfied during the "start-up phase" of the switch, and therefore, that the claim was not infringed.⁵²

During a claim construction hearing prior to trial, the district court acknowledged the dispute over the whether there can be any "exception" to the "only if" limitation, but declined to resolve it.⁵³ Instead, the district court held that "[o]nly if' has a well-understood definition, capable of application by both the jury and this court in considering the evidence submitted in support of an infringement or invalidity case."⁵⁴ At trial, both parties presented arguments regarding whether or the "only if" limitation allows for exceptions.⁵⁵ The jury found the claim infringed.⁵⁶

The Federal Circuit vacated the judgment of infringement.⁵⁷ It held that *Markman* required the district court to resolve the dispute over the scope of the "only if" limitation.⁵⁸ The Federal Circuit explained the district court "failed to resolve the parties' dispute because the parties disputed not the meaning of the words themselves, but the scope that should be encompassed by this claim language."⁵⁹ The Federal Circuit continued, "[a] determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute."⁶⁰

Following this holding, the Federal Circuit proceeded to assure district courts that they "are not (and should not be) required to construe every limitation present in a patent's asserted claims." The

^{50.} Id. at 1360.

^{51.} Id. at 1361.

^{52.} *Id*.

^{53.} Id.

^{54.} *Id.* (quoting O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., No. 2:04–CV–32, 2005 WL 6343460, at *1 (E.D. Tex. Aug. 26, 2005)).

^{55.} O2 Micro, *supra* note 4, at 1358.

^{56.} Id.

^{57.} Id. at 1361, 1366.

^{58.} Id. (citing Markman, supra note 25).

^{59.} O2 Micro, *supra* note 4, at 1361.

^{60.} Id

^{61.} Id. at 1362.

Federal Circuit quoted its prior statement in *U.S. Surgical Corp*. that claim construction "is not an obligatory exercise in redundancy." The *U.S. Surgical* case had been tried and appealed prior to the Supreme Court's decision in *Markman* and had come back before the Federal Circuit on remand for further consideration in light of *Markman*. On remand, the Federal Circuit found that there was no error in the trial court's failure to provide claim constructions because none of the proffered constructions "was directed to, or has been shown reasonably to affect, the determination of obviousness" that had been dispositive in that case. While acknowledging this outcome in *U.S. Surgical*, the Federal Circuit nonetheless concluded that "[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it."

III. WHEN IS A "PLAIN MEANING" CONSTRUCTION ADEQUATE?

One key question raised by *O2 Micro* is when, if ever, it is appropriate for trial courts to resolve the parties' disputes by holding that a claim term has its "plain meaning."

The Unwired Planet cases are illustrative of the fact that, on the whole, accused infringers tend to seek detailed constructions, while patentees tend to ask for "plain meaning." There are numerous strategic reasons that parties typically behave in this manner. For example, even some months into discovery, the patentee may have a less detailed understanding of a complex accused product than the accused infringer. A patentee may perceive a "plain meaning" construction as affording more flexibility down the road to read the patent claim on the accused product as details about that product emerge. More generally, a patentee may reason that the more flexibility it maintains regarding claim scope, the more likely it is to survive summary judgment and get in front of a jury. It is therefore common for patentees to offer "plain meaning" as a broader and/or more flexible alternative to the defendant's proposed construction.

^{62.} *Id.* (quoting U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997)).

^{63.} U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997).

^{64.} *Id*

^{65.} O2 Micro, supra note 4, at 1362.

^{66.} Compare, e.g., Unwired Planet, supra note 5, at *1 & n.3 (construing twenty-two claim terms despite plaintiff's request for numerous "plain meaning" constructions) with Unwired Planet, supra note 10, at *2 (holding that fourteen of sixteen claim terms have their "plain meaning").

^{67.} See Unwired Planet, supra note 5, at *1 & n.3; Unwired Planet, supra note 10, at *2.

For the accused infringer, the reverse is true. The accused infringer will have a detailed knowledge of its products and will be motivated to make clear, as early in the case as possible, that the patent does not read on its product. The lower standard of proof for non-infringement (preponderance of the evidence)⁶⁸ versus invalidity (clear and convincing evidence)⁶⁹ may tip the strategic scale for an accused infringer to seek a narrow construction that excludes the accused product, rather than a broad construction that encompasses the prior art. With the increasing popularity of *inter partes* review, an accused infringer may even employ a dual strategy of narrow constructions in the district court litigation and broad constructions before the Patent Trial and Appeals Board under the "broadest reasonable interpretation" standard.⁷⁰

Because of these competing strategic interests, it is not uncommon for a district court to be faced with a long wish list of detailed constructions from an accused infringer, while the patentee urges that fewer terms be construed or that many of the terms be given their "plain meaning." On occasion, the reverse can also be true, with an accused infringer seeking a "plain meaning" construction and a patentee seeking detailed definition that, for example, the patentee hopes will clearly distinguish the claimed invention from a key prior art reference, or will clarify that the accused product is in fact within the scope of the claim.

O2 Micro provides that the "determination [of] a claim term['s] 'plain and ordinary meaning' may be inadequate when the term has more than one ordinary meaning or when reliance on the term's ordinary meaning does not resolve the parties' dispute." But this begs the question: When does reliance on the term's ordinary meaning resolve the parties' dispute?

A. Rejection of a Narrow Construction in Favor of "Plain Meaning" May Resolve the Parties' Dispute, Particularly When It Is Binary

Multiple Federal Circuit decisions, discussed below, have held that by explicitly rejecting a narrow construction in favor of "plain

^{68.} See, e.g., Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1310 (Fed. Cir. 2005).

^{69.} Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91 (2011).

^{70.} Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2146, 195 L. Ed. 2d 423 (2016).

^{71.} O2 Micro, *supra* note 4, at 1361.

meaning," the district court did, in fact, resolve the dispute over claim scope, as *O2 Micro* requires.

In *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, for example, ActiveVideo argued that the district court erred under *O2 Micro* by rejecting its claim construction and adopting Verizon's proposed "plain meaning" construction.⁷² The Federal Circuit disagreed and affirmed the district court's denial of ActiveVideo's JMOL of non-infringement.⁷³

The patent at issue in *ActiveVideo* disclosed a two-dimensional method of channel surfing, with "anchor channels" on a vertical axis (e.g., ABC) and channels related to the anchor channels (e.g., ABC News, ABC Sports) on a horizontal axis.⁷⁴ Superimposed on the display of an anchor channel were two indications: one identifying the anchor channel as an anchor channel and another indicating the existence of associated multiplex channels.⁷⁵ In particular, the method claim required, in relevant part, "superimposing the first indication over the display of the first anchor channel" and "including with the first indication a second indication" related to the associated channels.⁷⁶

ActiveVideo argued that under a correct construction of the claim, "the first and second indications must be overlaid on the displayed anchor channel *and* that they must be distinct from the content of the anchor channel." ActiveVideo argued that its system could not infringe under this construction because the indications (channel labels) in its system are broadcast as part of the "underlying content" of the anchor channel and are thus not "superimposed." In other words, it appears that the parties disputed what it meant to "superimpose" an indication: Did it require two distinct pieces of graphical content with one overlaid on the other, or could the limitation be satisfied by a single piece of graphical content with multiple visual elements?

Verizon argued that "the district court resolved the dispute between the parties and satisfied *O2 Micro* by declining to adopt

^{72.} ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc., 694 F.3d 1312, 1326 (Fed. Cir. 2012).

^{73.} Id.

^{74.} Id. at 1324-1325.

^{75.} Id. at 1325.

^{76.} *Id.* at 1325.

^{77.} *Id*.

^{78.} Id.

ActiveVideo's construction and giving the terms their plain and ordinary meaning."79 The Federal Circuit agreed that rejecting the accused infringer's proposed restrictive construction was sufficient to resolve the dispute. 80 The Federal Circuit further held that "[i]t was up to the jury to determine from the evidence presented at trial whether the ActiveVideo system satisfied the plain and ordinary meaning of the 'superimposing' limitations."81

The Federal Circuit reached a similar conclusion in Summit 6, LLC v. Samsung Elecs. Co. 82 There, the dispute centered on the words "being provided to" in the following claim limitation: "[] preprocessing said digital content at said client device in accordance with one or more pre-processing parameters, said one or more preprocessing parameters being provided to said client device from a device separate from said client device. . ." (emphasis added). 83

Samsung, the accused infringer, argued in the trial court that this limitation required ongoing activity, namely, the provision of the preprocessing parameters during the operation of the method.⁸⁴ The patentee argued that the phrase merely described a characteristic of the pre-processing parameters, i.e., that they originated on a separate device. 85 The patentee argued that the phrase imposed no temporal limitation on when the pre-processing parameters had to be provided. 86 The patentee requested that the words be construed as having their "plain meaning," and the trial court agreed.⁸⁷

On appeal, the Federal Circuit agreed with the patentee that "being provided to" did not require ongoing activity, holding that the phrase is "not a step in the claimed method."88 The Federal Circuit also rejected Samsung's argument that with its "plain meaning" construction, the trial court had failed to resolve the dispute over the scope of the claim term, as required by O2 Micro. 89 The Federal Circuit explained that "[a]t the claim construction stage, the district

^{79.} Id.

^{80.} Id. at 1326.

^{81.}

Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1290-91 (Fed. Cir. 2015). 82.

Id. (quoting U.S. Patent No. 7,765,482 at col.14 ll.1-5 (filed Oct. 8, 2004)) (italics 83. altered).

^{84.} Id. at 1291.

^{85.} Id.

^{86.} Id.

^{87.} Id.

^{88.} Id.

^{89.} Id.

court rejected Samsung's argument... to further construe the term because it was a 'straightforward term' that required no construction." The Federal Circuit concluded that "[b]ecause the plain and ordinary meaning of the disputed claim language is clear, the district court did not err by declining to construe the claim term."

When the trial court rejects a proposed construction as too narrow or otherwise incorrect, it undoubtedly goes some way toward resolving a dispute over claim scope. Whether it has *fully* resolved the dispute, however, and ensured that the jury will not misapply the claim language, would seem to depend on the circumstances.

The Summit 6 case appears to be a good example of a rejection of a detailed construction in favor of "plain meaning" construction that truly resolved the dispute between the parties. There was a single, binary dispute over the scope of "being provided to": Did it require ongoing activity, or not? The trial court held that it did not, a result later confirmed by the Federal Circuit. Samsung presumably knew better than to argue otherwise to the jury (or was ordered not to do so). Thus, there was little danger that the jury would take claim construction into its own hands and misconstrue the scope of the claim, despite the trial court's "plain meaning" construction.

The outcome in the *ActiveVideo* case is perhaps more ambiguous. The trial court rejected the accused infringer's argument that the "superimposed" limitation requires there must be two distinct pieces of graphical content that are overlaid onto a third. The patentee argued on appeal, however, that even this narrowed construction would not have eliminated infringement because it "places no limitation on how or where the indication is generated, as opposed to how it is displayed to the viewer. The patentee's argument suggests that the dispute was not binary and that there were at least three possible interpretations of the "superimposed"

^{90.} Id.

^{91.} *Id*.

^{92.} Ia

^{93.} Even when a trial court adopts a "plain meaning" instruction, it can still prevent the parties from advocating a construction that it previously rejected, thus cabining the scope of the "plain meaning" that the jury may consider. *See, e.g.*, Finjan, Inc. v. Secure Computing Corp., 626 F.3d 1197, 1207 (Fed. Cir. 2010) (no violation of duty under *O2 Micro* where trial court "prevented the jury from reconstruing the term by stopping Defendants' expert" from arguing a position the court had previously rejected).

^{94.} ActiveVideo, supra note 72.

^{95.} Id.

limitation: (a) distinct graphics that are overlaid at the time of display to the viewer; (b) distinct graphics that are overlaid at any point in time; or (c) a single piece of graphical content with distinguishable elements. The trial court rejected the first possibility, but then turned the problem over to the jury to apply the "plain meaning." It is not entirely clear that the district court's resolution left no room for the jury to make its own determinations of claim scope.

B. In Eon Corp., Rejecting A Narrow Construction for "Plain Meaning" Failed to Resolve a Non-Binary Dispute

In *Eon Corp*, the Federal Circuit held that the trial court had neglected its duties under *O2 Micro* by rejecting the accused infringer's proposed narrow constructions and giving the limitations "portable" and "mobile" their "plain meaning." The Federal Circuit further determined that no reasonable jury could have found that the accused devices were "portable" or "mobile" in the context of the claimed invention, and reversed the judgment of infringement. 98

The patents at issue in *Eon Corp*. were directed to techniques for wireless communications between a local subscriber and a base station to overcome certain problems related to heavy network traffic. The claims required the subscriber units to be "portable" or "mobile." The specification described "portable battery-operated milliwatt transmitter subscriber units" that can be "moved throughout the base station geographical area" and can be "handed off" from cell to cell. The accused subscriber units were "electric watt-hour utility meters designed to be attached to the exterior walls of buildings." 102

Silver Spring, the accused infringer, sought a construction of "portable" and "mobile" as "capable of being easily and conveniently moved" and "designed to operate without a fixed location," as opposed to "fixed or stationary products that are only theoretically capable of being moved." The patentee, Eon, argued that the term should be given its "ordinary meaning." The trial court agreed,

^{96.} Id. at 1324-26.

^{97.} Eon Corp., *supra* note 14, at 1318.

^{98.} Id. at 1323.

^{99.} Id. at 1316.

^{100.} Id. at 1317.

^{101.} Id.

^{102.} Ia

^{103.} Id

^{104.} Id.

holding that Silver Spring was "asking for nothing the plain and ordinary meaning of the terms cannot do on their face—distinguish from 'stationary' or 'fixed.""¹⁰⁵ The trial court held that this "resolved the parties' claim scope dispute."¹⁰⁶

The Federal Circuit disagreed. ¹⁰⁷ It explained that while "a court need not attempt the impossible task of resolving all questions of meaning with absolute, univocal finality," the trial court does have a duty under *O2 Micro* "to resolve a dispute about claim scope that has been raised by the parties." ¹⁰⁸ The Federal Circuit continued:

The crucial question was whether, as Silver Spring argued, the terms should not be construed so broadly such that they covered "fixed or stationary products that are only theoretically capable of being moved." ¹⁰⁹ By determining only that the terms should be given their plain and ordinary meaning, the court left this question of claim scope unanswered, leaving it for the jury to decide. This was legal error. ¹¹⁰

The Federal Circuit proceeded to construe the words "portable" and "mobile" in light of the specification. The majority found that "the specification's guidance on the claimed 'portable' and 'mobile' units is that they are low-power, battery operated units that are easily transported between different locations in a house, office, car, or throughout a cell territory," and that "Eon's position is completely untethered to the context of the invention in this case." Having effectively adopted the claim construction that had been proposed by Silver Spring and rejected by the trial court, the Federal Circuit held that no reasonable jury could have found the accused utility meters to be "portable" or "mobile." 113

Judge Bryson's dissent in *Eon Corp.* disagreed that the specifications of the asserted patents supported the "restrictive definition" adopted by the majority, and argued that under the "ordinary" meaning of "mobile" and "portable," there was sufficient

^{105.} Id.

^{106.} Id. (internal quotations omitted).

^{107.} Id. at 1318.

^{108.} Id. at 1319.

^{109.} *Id*.

^{110.} Id.

^{111.} *Id.* at 1320.

^{112.} Id. at 1321.

^{113.} Id.

evidence to support the jury's verdict.¹¹⁴ The dissent pointed out that the jury heard extensive testimony regarding the portability of the utility meters, including evidence that the accused meters "are smaller than a volleyball and can be, and are, easily carried and installed by hand."¹¹⁵ The dissent concluded that the "ordinary meaning [of portable]—something capable of being easily and conveniently transported—would clearly apply to the accused devices in this case."¹¹⁶

Judge Bryson's dissent further disagreed that the trial court had shirked its duty under *O2 Micro* by holding that the disputed terms had their "plain meaning." Instead, he argued, "the district court's instruction that the jury should give those terms their plain and ordinary meaning resolved the parties' dispute, because it was clear that Eon was relying on the plain meaning of the terms and Silver Spring was relying on a special definition of the terms that it claimed to be supported by the language of the patents." ¹¹⁸

At a high level, the holding of *Eon Corp*. may appear inconsistent with the holding of *Summit 6*. In both cases, the trial court rejected a narrow proposed construction as incorrect, and told the parties to apply the "ordinary meaning" instead. ¹¹⁹ Yet in *Summit 6*, the Federal Circuit held that this was effective in resolving the parties' dispute, while in *Eon Corp*., the Federal Circuit held that it was not. ¹²⁰

On closer inspection, it may be possible to reconcile the two decisions. In *Summit 6*, the claim construction dispute was binary: either the claim required ongoing activity, or it did not. By rejecting Samsung's argument that the claim required ongoing activity, the trial court effectively removed the issue as a potential non-infringement argument for Samsung. In *Eon Corp.*, by contrast, the trial court's rejection of Silver Spring's proposal that the claims required a subscriber unit "designed to operate without a fixed location" did not resolve the underlying infringement question. The parties continued to dispute whether the accused utility meters were "portable" or

^{114.} Id. at 1323 (Bryson, J. dissenting).

^{115.} Id. at 1324.

^{116.} Id. at 1329.

^{117.} Id.

^{118.} Ia

^{119.} Eon Corp., supra note 14, at 1317; Summit 6, supra note 82.

^{120.} Eon Corp., *supra* note 14, at 1318; Summit 6, *supra* note 82, at 1291.

"mobile" under the "ordinary meaning" of those words. ¹²¹ In other words, the potential scope of "portable" was not binary, but rather, fell on a continuum. Even if the trial court lopped off the furthest end of the continuum that would have guaranteed a win for Silver Spring, there was still ample room left for dispute at trial.

Put another way, one interpretation of *Eon Corp* is that the duty under *O2 Micro* is to fully resolve disputes over how the words of the claim map to the specific things at issue. There may be underlying fact disputes about what those things are or how they work. But, once the jury resolves those underlying fact disputes, the court's constructions should ideally compel a single outcome as to the presence or absence of a limitation in the accused product. When there is no underlying fact dispute, claim construction should be dispositive in and of itself. *Eon Corp*. demonstrates that rejecting a narrow construction in favor of "plain meaning" *may* meet these criteria, but there is no guarantee that it will do so.

If this interpretation of *Eon Corp*. is correct, it significantly limits those cases where it is appropriate for a trial court to resolve a dispute by resorting to "plain meaning." A claim construction order like the one in the *Square* case, for example, where the trial court assigns a "plain meaning" to most of the disputed terms with little analysis, would present a significant danger of ultimate reversal under this reading of *Eon Corp*. ¹²²

Of course, an early but limited claim construction order like the one in the *Square* case will not necessarily be the trial court's last word on claim scope. The district court in the *Square* case could have revisited some of the "plain meaning" constructions at a later time, when the non-infringement disputes had further crystallized. The next section examines this procedural dimension of *O2 Micro*: at what point can the Court say that it has done enough?

IV. WHEN IS IT TOO LATE TO ASK FOR FURTHER CONSTRUCTION?

There is no fixed rule that requires courts to construe claims at a particular point in the proceedings. District courts have experimented with different procedures. For example, it is not uncommon for district courts to forego a separate *Markman* hearing and construe

^{121.} Eon Corp., *supra* note 14, at 1318.

^{122.} Unwired Planet, supra note 10, at *2 (citing O2 Micro, supra note 4).

claims in the course of summary judgment proceedings.¹²³ Districts with heavy patent dockets, however, tend to have local rules or a general practice of scheduling separate *Markman* hearings within a set number of days of the Initial Case Management Conference.¹²⁴

O2 Micro requires district courts to resolve disputes over claim scope. 125 At the same time, Federal Circuit authority recognizes that there must be some limits on the demands that litigants can make of judicial resources. One limiting factor is that "only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy." Attorneys, however, are quite adept at generating controversies. This section discusses some of the procedural limits that the Federal Circuit has recognized on the duty to resolve disputes over claim scope.

A. Waiting Too Long to Raise a Dispute Can Result in Waiver

Soon after its opinion in *O2 Micro*, the Federal Circuit made clear that the duty to resolve disputes over claim scope does not mean that litigants can raise claim construction issues for the first time in post-trial motions. ¹²⁷ The Federal Circuit held that "litigants waive their right to present new claim construction disputes if they are raised for the first time after trial."

More recently, the Federal Circuit held that waiting to seek clarification of existing constructions until after the close of evidence may be too late. ¹²⁹ In *Akamai v. Limelight*, the Federal Circuit held that there was no violation of *O2 Micro* where the parties stipulated to claim construction, and the accused infringer only sought a narrower

^{123.} See, e.g., Schoenhaus v. Genesco, Inc., 440 F.3d 1354, 1356 (Fed. Cir. 2006) ("Senior Judge Louis H. Pollak did not issue a separate *Markman* order; rather, in a carefully-crafted summary judgment opinion, he construed two limitations of claim 1 of the patent and found as a matter of law that neither limitation was present in the accused shoes.").

^{124.} See, e.g., Patent Local Rules, UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA (Sept. 28, 2016), available at www.cand.uscourts.gov/localrules/patent.

^{125.} O2 Micro, supra note 4.

^{126.} Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999). *See also, e.g.*, Silicon Graphics, Inc. v. ATI Techs., Inc., 607 F.3d 784, 798 (Fed. Cir. 2010) ("The testimony of both sides' experts at trial indicates that that term was not fundamentally in dispute, thus, it was proper for the district court not to construe it.").

^{127.} Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683, 694 (Fed. Cir. 2008).

^{128.} *Id.* (quoting Conoco, Inc. v. Energy & Env't Int'l, L.C., 460 F.3d 1349, 1359 (Fed. Cir. 2006)). *See also* Lazare Kaplan Int'l, Inc. v. Photoscribe Techs., *Inc.*, 628 F.3d 1359, 1376 (Fed. Cir. 2010) (finding waiver).

^{129.} Akamai Techs., Inc. v. Limelight Networks, Inc., 805 F.3d 1368, 1376 (Fed. Cir. 2015).

construction at the jury instruction stage. The Federal Circuit has also held that the district court did not abuse its discretion in holding that a party could not add new claim construction theories on the eve of trial, where the request came a year after a formal claim construction process and *Markman* order that was "premised on the express belief that there were no other claim construction disputes." ¹³¹

The fact that the court need not entertain late claim construction requests from the parties, however, does not mean that it may not do so. The Federal Circuit has made clear that "district courts may engage in a rolling claim construction, in which the court revisits and alters its interpretation of the claim terms as its understanding of the technology evolves." In one case, the Federal Circuit held that there was no error in the district court adjusting a Magistrate's prior construction of a term in response to a cross-examination at trial that revealed a dispute over the scope of a claim term. Far from finding any error, the Federal Circuit held that the late clarification was consistent with the trial court's duty under *O2 Micro* to resolve such disputes.

B. Nuance Communications Confirms That Failure To Crystallize A Dispute Early Can Lead To Harsh Outcomes For The Proponent Of A Narrow Construction

The decision of the Federal Circuit in *Nuance Communications, Inc. v. ABBYY USA Software House, Inc.* arguably went further than prior precedent in limiting the procedural opportunities for a party to ask the court to resolve a dispute over claim scope. ¹³⁵

In that case, plaintiff Nuance asserted several patents against ABBYY related to optical character recognition or "OCR" technology. ¹³⁶ In an early *Markman* proceeding, the parties disputed the construction of "identifying said unknown character." The accused infringer ABBYY proposed a narrower meaning for "identifying" that limited it to certain specific OCR techniques, while

^{130.} *Id*.

^{131.} Bettcher Indus., Inc. v. Bunzl USA, Inc., 661 F.3d 629, 640-41 (Fed. Cir. 2011).

^{132.} Pfizer, Inc. v. Teva Pharm., USA, Inc., 429 F.3d 1364, 1377 (Fed. Cir. 2005) (quoting Jack Guttman, Inc. v. Kopykake Enters., Inc., 302 F.3d 1352, 1361 (Fed. Cir. 2002)).

^{133.} Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd., 599 F.3d 1308, 1315 (Fed. Cir. 2010).

^{134.} Id. at 1315-16 (citing O2 Micro, supra note 4).

^{135.} Nuance Commc'ns, supra note 16.

^{136.} Id. at 1369.

^{137.} Id.

patent holder Nuance argued that "identifying" is "a simple word that is used every day and there is no indication that the inventors intended to use this term differently from its commonly understood meaning." The district court agreed with Nuance and construed "identifying" to mean "identifying." ¹³⁹

The parties then took discovery and filed summary judgment motions. It became apparent in the summary judgment briefing that the parties disagreed over the "plain meaning" of "identifying." ABBYY's expert argued that the accused software did not "identify" an unknown character because it merely produced "a list of guesses with associated confidence values." In response, Nuance asked for briefing on the meaning of "identify" so that the dispute could be resolved before trial. The trial court refused. Noting that it had already held two claim construction hearings, the trial court held that the parties must either agree on a construction, or the court will supply a dictionary definition, or "just tell the jury to use its ordinary meaning."

Unsurprisingly, the parties failed to reach an agreement. The trial court then adopted a rather tautological dictionary definition of "identify" that had been proposed by ABBYY—"to establish the identity of." The jury found that ABBYY did not infringe the patents. 146

On appeal, Nuance argued that the district court had failed to exercise its duty to interpret the scope of the claim, as required by *O2 Micro*. The Federal Circuit disagreed. The Federal Circuit's reasoning was primarily procedural: "The fact that shortly before trial Nuance became dissatisfied with its own proposed construction and sought a new one does not give rise to an O2 Micro violation." The Federal Circuit cited *Akamai v. Limelight*, discussed above, in which

^{138.} Id. at 1372.

^{139.} *Id*.

^{140.} Id.

^{141.} *Id*.

^{142.} *Id*.

^{143.} *Id*.

^{144.} *Id*.

^{144.} *1a*.

^{145.} *Id.* at 1373.

^{146.} Id. at 1370.

^{147.} Id. at 1373.

^{148.} Id. (citing Akamai, supra note 129).

the accused infringer sought to narrow a stipulated construction at the jury instruction stage. 149

There is certainly an appeal to the argument that Nuance, having previously argued for "plain meaning," made its bed and must lie in it. But one could also argue that this is a harsh outcome. Claim construction hearings are generally held prior to expert reports or summary judgment motions, and as appears to have been the case in *Nuance*, are often held prior even to the close of fact discovery. ¹⁵⁰ It can be very difficult, at an early stage, to anticipate every argument that the opposing party may raise to attempt to show that a particular feature is either within or outside of the scope of a claim term.

In a similar vein, it is not clear that the analogy to the *Akamai* case is a fair one. In *Akamai*, the accused infringer stipulated to one claim construction, then sought a narrower claim construction at the jury instruction phase, after the bulk of the trial was complete. ¹⁵¹ The previously stipulated construction was not "plain meaning" but an actual definition that, the Federal Circuit held, *excluded* the narrower construction sought by the accused infringer at the jury instruction phase. ¹⁵² In other words, what the Federal Circuit prohibited in that case was a *change* in position after trial. Here, what the plaintiff was arguably seeking was clarification, prior to trial, of an issue that the court had yet to address.

To say that the Federal Circuit's holding was harsh is not necessarily to say that it was wrong. District courts plainly need to be able to control their proceedings such that parties do not continue seeking to revise claim constructions *ad infinitum*. Parties should be motivated to crystallize disputes sooner rather than later, and may be less motivated to do so if they know that they can always revisit claim construction at a later date. The district court's seeming impatience in the *Nuance* litigation is quite understandable in light of the fact that it had already held two claim construction hearings. Nonetheless, giving district courts the green light to leave claim scope to the jury unless the dispute is crystallized early in the litigation would be a significant limit on *O2 Micro*.

^{149.} Id. at 1373.

^{150.} *Id.* at 1372 ("The parties then took discovery and prepared for trial using the court's construction.").

^{151.} Akamai, supra note 129.

^{152.} *Id.* ("The lack of further limitations was itself a characteristic of the construction to which both parties agreed.").

The *Nuance* decision is somewhat ambiguous as to whether it was decided entirely on the procedural ground that Nuance's request for clarification came too late. As an alternative to the argument that the trial court failed to resolve the claim construction dispute, Nuance argued that the trial court had in fact resolved the claim construction dispute against it. Nuance argued that the dictionary definition of "identify" that the trial court adopted conflicted with the intrinsic evidence, because portions of the specification indicated that "identifying" includes ambiguous identifications. The Federal Circuit responded that the trial court's construction was in fact favorable to Nuance because "[o]ne could 'establish the identity of' a single character or a class of characters." The Federal Circuit continued:

The operative words in the claims, then, are not "identifying" or "recognizing," but instead are the object of those words—what is being identified or recognized. And that is exactly what the parties argued over at trial—Nuance contended that ABBYY's software satisfies the "identifying an unknown character" limitation when its recognition process picks out a class of characters, while ABBYY presented evidence to the contrary. The district court did nothing to limit Nuance's ability to present its evidence on this issue, and its instruction to the jury did not prevent the jury from fully considering each party's position. After weighing the evidence, the jury agreed with ABBYY.

There are two ways to read this holding. One interpretation is that there was no dispute over claim scope in the first place, but rather a fact dispute, which the jury resolved by "weighing the evidence." This reading is problematic, however. There did not appear to be any dispute about how the accused FineReader software actually worked. As the Federal Circuit recited in its background facts, the software "produce[s] a list of 'guesses' and provide[s] a confidence value for each guess indicating how likely it is that the guess is correct." Rather, the dispute was whether or not the phrase "identifying an unknown character" should be understood broadly enough to cover

^{153.} Nuance Commc'ns, supra note 16, at 1373.

^{154.} Id.

^{155.} *Id.* at 1373-74.

^{156.} Id. at 1374.

^{157.} Id. at 1371.

this functionality.¹⁵⁸ The dispute was about mapping words to things—arguably the function of the court.

A better interpretation of the Federal Circuit's holding may be that Nuance not only asked too late, it asked the wrong question. It asked the court to construe the scope of "identifying," when in fact, it should have asked the court to construe the scope of "what is being identified or recognized." This, too, is a seemingly harsh outcome. While it is certainly incumbent on the parties in the first instance to correctly frame the question, the fundamental dispute was not mysterious: Is identifying a probabilistic set of characters "identifying an unknown character," or is it not? That question, it appears, was left to the jury to decide.

In short, the opinion in *Nuance* is a nuanced one, but at least one reading is that even a dispute over claim scope that was raised at the summary judgment stage may be allowed to go through to the jury, if the court determines that it should have been raised in an earlier *Markman* proceeding.

C. GPNE Corp. Holds That It May Not Be Too Late, Even During Trial, To Seek Clarification

Even more recently, the Federal Circuit held that two weeks into trial may not be too late to ask for a clarifying construction. The dispute in *GNPE* centered on the claim term "node," which the trial court construed as a "pager with two-way data communications capability that transmits wireless data communications on a paging system that operates independently from a telephone network." The patent owner GPNE argued that including "pager" in the construction was too limiting, and that even if it "pager" was correct, that the trial court erred by failing to further construe the word "pager," which left an issue of claim scope to the jury, contrary to *O2 Micro*. 162

Apple, the accused infringer, argued that the inclusion of "pager" in the construction was correct, and that GPNE had waived its arguments under *O2 Micro* because it had failed to request a construction for "pager" during claim construction proceedings. ¹⁶³ The Federal Circuit held that while the inclusion of "pager" in the

^{158.} Id. at 1373-74.

^{159.} Id. at 1373.

^{60.} GPNE Corp. v. Apple Inc., 830 F.3d. 1365, 1372 (Fed. Cir. 2016).

^{161.} Id. at 1369.

^{162.} Id. at 1370.

^{163.} Id. at 1372.

construction was correct, it was not too late for GPNE to seek a clarification of "pager" by requesting a further jury instruction two weeks into trial. The Federal Circuit distinguished its previous holdings that claim construction disputes may not be raised to the trial court *after* trial, noting that the case had not yet gone to the jury. Further, the Federal Circuit noted that even during the *Markman* hearing, GPNE had argued that it was inappropriate to include "pager" in the claim construction because the parties would end up arguing over the definition of a pager. ¹⁶⁶

Though it found no waiver, the Federal Circuit nonetheless held that the trial court did not err in refusing to further construe "pager" during the trial. 167 The Federal Circuit held that GPNE's real complaint was that the trial court allowed Apple to argue to the jury that it does not infringe because the accused iPhones and iPads are unlike "1990's-era legacy pagers." But, according to the Federal Circuit, the existing construction, which required use of a "paging system that operates independently from a telephone network," adequately clarified that the claimed pagers were unlike those legacy pagers. 169 Construing the dispute as one about improper arguments to the jury, rather than one about inadequate claim construction, the Federal Circuit found that the district court did not abuse its discretion in finding that Apple's arguments did not require a new trial. ¹⁷⁰ The Federal Circuit noted, for example, that GPNE had ample opportunity to rebut Apple's argument in its examination of experts and its own closing argument, and that it availed itself of those opportunities.¹⁷¹

The most significant holding of *GPNE* for purposes of this Article is that it is not necessarily too late, even during trial, to invoke *O2 Micro* to seek further construction of a term that has already been construed. It remains to be seen whether future courts will limit this holding to situations where the party seeking the further construction first raised the potential ambiguity during *Markman* proceedings, or whether courts will take a more generous view and allow any bona

^{164.} Id.

^{165.} Id. (distinguishing Lazare Kaplan Int'l, Inc. v. Photoscribe Techs., Inc., 628 F.3d 1359, 1376 (Fed. Cir. 2010) and Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683, 694 (Fed. Cir. 2008)).

^{166.} Id.

^{167.} Id.

^{168.} Id at 1373.

^{169.} *Id*

^{170.} Id.

^{171.} Id.

fide request to clarify disputes over claim scope up through the submission of the case to the jury.

The GPNE case also serves as a reminder of the more hands-on role that trial courts *could* play in disposing of infringement disputes through early resolution of disputes over claim scope. In the very last paragraph of the opinion, the Federal Circuit observes that "GPNE does not appear to articulate an infringement position under the district court's construction of 'node." In a footnote, the Federal Circuit further explains that "GPNE has not developed any argument for why the following evidence fails to support the jury's noninfringement verdict. All of the accused devices operate on either GPRS or LTE networks. At trial, GPNE's expert conceded that both of these networks become inoperable without GSM resources, J.A. 28417, and that the GSM system is a 'telephone network.' J.A. 28413. Apple's expert testified to the same. See J.A. 28901-03, 28906. Linking these statements together yields the conclusion that the accused devices do not 'operate independently of a telephone network.",173

In other words, the Federal Circuit found on appeal that based on the undisputed evidence that the accused iPhones and iPads use a "telephone network," the trial court's construction of "node" precluded this possibility of infringement. This begs the question of why the case had to go to a jury trial in the first place. While there may have been factual disputes about "telephone networks" leading up to trial that are not apparent from the face of the *GPNE* opinion, this final footnote is at least suggestive that the trial court, in resolving the scope of the claim term "node," might have been able to resolve the case in its entirety. This, in turn, is a powerful reminder that the mandate in *O2 Micro* that judges must resolve disputes over claim scope can, in effect, be a mandate to judges to resolve patent disputes before they reach a jury.

CONCLUSION

After several years of experience with *O2 Micro*, the contours of the courts' "duty to construe" are becoming more clear. As the above discussion demonstrates, however, district courts still have significant leeway in how to approach their duty to resolve disputes over claim scope.

^{172.} Id. at 1374.

^{173.} Id. at 1374 n.1.

District courts are experimenting with ways to push parties to articulate claim construction disputes in ways that will be dispositive. The Northern District of California requires litigants to identify the claim terms for construction that may be claim or case dispositive. ¹⁷⁴ Judge Robinson in the District of Delaware requires that for "any contested claim limitation, each party must submit a proposed construction," noting that "[r]esorting to 'plain and ordinary' meaning is not sufficient, as it effectively leaves claim construction in the hands of the experts rather than the court." ¹⁷⁵ Chief Judge Stark in the same district had adopted Judge Robinson's reasoning, if not her outright prohibition on "plain meaning" constructions. ¹⁷⁶

These trial courts appropriately read *O2 Micro* as a mandate to take an active role through claim construction in ensuring that trial outcomes are grounded in protecting what the inventor actually invented. Cleanly mapping words to things is not easy, but it is the system we have, and it is the diligent efforts of judges that ultimately make that system work.

^{174.} Patent Local Rules, supra note 124, at 4-3(c).

^{175.} The Honorable Sue L. Robinson, *Patent Case Scheduling Order* (Feb. 5, 2015), at 4 & n.6, http://www.ded.uscourts.gov/sites/default/files/Chambers/SLR/Forms/Sched-Order-Patent2-05-15.pdf.

^{176.} The Honorable Leonard P. Stark, *Revised Procedures for Managing Patent Cases* (June 18, 2014) at 8, http://www.ded.uscourts.gov/sites/default/files/Chambers/LPS/PatentProcs/LPS-PatentProcedures.pdf.

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