

**United States Court of Appeals
for the Federal Circuit**

KERANOS, LLC,
Plaintiff-Appellant

**UNITED MODULE CORPORATION, PETER
COURTURE, J. NICHOLAS GROSS,**
Third Party Defendants

v.

**SILICON STORAGE TECHNOLOGY, INC.,
FREESCALE SEMICONDUCTOR, INC.,
MICROCHIP TECHNOLOGY, INC., SAMSUNG
SEMICONDUCTOR, INC., SAMSUNG
ELECTRONICS CO. LTD., TAIWAN
SEMICONDUCTOR MANUFACTURING CO., LTD.,
TSMC NORTH AMERICA,**
Defendants-Appellees

KERANOS, LLC,
Plaintiff-Appellant

v.

**ANALOG DEVICES, INC., INTERNATIONAL
BUSINESS MACHINES CORPORATION, INTEL
CORPORATION, NATIONAL SEMICONDUCTOR
CORPORATION, NXP SEMICONDUCTORS USA,
INC., TEXAS INSTRUMENTS, INC.,**
Defendants-Appellees

2014-1360, 2014-1500

Appeals from the United States District Court for the Eastern District of Texas in No. 2:13-cv-00017-MHS-RSP, 2:13-cv-00018-MHS-RSP, Judge Michael H. Schneider.

Decided: August 13, 2015

MICHELLE G. BREIT, Agility IP Law, LLP, Menlo Park, CA, argued for plaintiff-appellant. Also represented by JOHN J. EDMONDS, Collins, Edmonds, Pogorzelski, Schlather & Tower PLLC, Houston, TX.

DARYL JOSEFFER, King & Spalding LLP, Washington, DC, argued for defendants-appellees. Also represented by ADAM CONRAD, Charlotte, NC; JEFFREY D. MILLS, Austin, TX; BRUCE W. SLAYDEN II, BRIAN C. BANNER, Slayden Grubert Beard PLLC, Austin, TX.

Before CHEN, BRYSON, and HUGHES, *Circuit Judges*.

CHEN, *Circuit Judge*.

This appeal involves whether appellant, an exclusive licensee, has standing to sue for patent infringement and whether the district court properly applied the local patent rules to deny appellant's motions to amend its infringement contentions. Appellant Keranos, LLC appeals from the final judgments of the United States District Court for the Eastern District of Texas entered after the district court denied Keranos's motions for leave to amend infringement contentions. Appellees Silicon Storage Technology, Inc. (SST), Freescale Semiconductor, Inc., Microchip Technology, Inc. (Microchip), Samsung

Semiconductor, Inc. and Samsung Electronics Co., Ltd. (collectively, Samsung), Taiwan Semiconductor Manufacturing Co., Ltd. and TSMC North America (collectively, TSMC), Analog Devices, Inc., International Business Machines Corporation, Intel Corporation, National Semiconductor Corporation, NXP Semiconductors USA, Inc., and Texas Instruments, Inc. assert that Keranos does not have standing to sue for infringement of U.S. Patent Nos. 4,795,719 (the '719 patent), 4,868,629 (the '629 patent), and 5,042,009 (the '009 patent).

We agree with the district court that Keranos has standing to sue for infringement of the asserted patents. We cannot determine based on the record, however, whether the district court abused its discretion in denying Keranos's motions for leave to amend infringement contentions based on the local patent rules. The court therefore *vacates* and *remands* for further consideration by the district court regarding Keranos's motions for leave to amend.

BACKGROUND

On June 23, 2010, Keranos sued forty-nine parties, including all appellees listed above except for SST, in the Eastern District of Texas for infringing three of its patents that generally relate to split-gate flash memory. Keranos accused appellees of using a specific type of flash memory technology developed by SST, called "Super-Flash," that implements a split-gate memory design.

Keranos, which was formed as a Texas corporation on February 10, 2010, obtained the rights to the asserted patents from United Module Corporation (UMC) on February 16, 2010, through an "Exclusive Patent License and Royalty Agreement." UMC continued to hold the legal title to the asserted patents, all of which expired prior to the filing of the current action; the '719 and '629 patents expired in 2006, and the '009 patent expired in

2008. Keranos did not join UMC as co-plaintiff in this action.

In the Northern District of California, SST and certain defendants from the Texas action then sued Keranos, UMC, Peter Courture, and J. Nicholas Gross¹ in four separate cases seeking declaratory judgments of noninfringement and invalidity of the same patents. The California actions were transferred to the Eastern District of Texas and consolidated into two cases: the original case filed by Keranos and the consolidated declaratory judgment case. Following a joint *Markman* hearing on December 12, 2012, the district court regrouped the defendants into two new cases: case number 2:13-cv-00017 pitting Keranos, UMC, Mr. Courture, and Mr. Gross against the manufacturers of the accused products, and case number 2:13-cv-00018, pitting Keranos against the alleged customers of the accused products who incorporated those products into larger products for sale.

In the original Texas action, the defendants moved to dismiss Keranos's actions for lack of standing under the Patent Act, because the patents asserted had expired before Keranos acquired them and filed suit. The district court concluded that the license agreement between UMC

¹ The California cases named as defendants Peter Courture, the alleged "sole director, officer, shareholder, and/or employee of UMC," and J. Nicholas Gross, the alleged "president, principal shareholder, and/or sole employee of Keranos," based on their alleged tortious interference. See First Amended Complaint ¶¶ 5, 6, 116–132, *Microchip Tech., Inc. v. United Module Corp.*, No. 2:11-cv-00332-DF (E.D. Tex. Jan. 27, 2012), ECF No. 108 (Case No. 2:11-cv-00332 was consolidated with Case Nos. 2:11-cv-00331, -333, and -334, which were regrouped as Case Nos. 2:13-cv-00017 and -18, from which this appeal was taken.). These claims are not at issue on appeal.

and Keranos transferred all substantial rights in the patents, giving Keranos standing to sue for infringement without joining UMC.

On December 19, 2011, before the cases were re-grouped, Keranos served its Local Patent Rule 3-1 Disclosure of Asserted Claims and Infringement Contentions (colloquially, infringement contentions). These original infringement contentions identified some of defendants' allegedly infringing products with specificity, by product name or number, and others more generally, by product family. After some discovery, on June 20, 2012, Keranos moved for leave to amend its infringement contentions. All defendants except Samsung opposed Keranos's motion. The cases progressed until August 5, 2013, when the district court in the case against the manufacturers denied Keranos's motion. Keranos unsuccessfully moved for reconsideration. In its order denying reconsideration, the district court explained that the local patent rules required Keranos to identify infringing products by specific product numbers, rather than by product families, and that Keranos's failure to do so led to the denial of its motion to amend its infringement contentions. The district court also found that Keranos had not demonstrated that it was diligent in "search[ing] for and identify[ing] infringing products to the extent possible based on publicly available information." J.A. 8.

On January 29, 2014, the magistrate judge held a hearing where he explained that the only accused products remaining in the case against the manufacturers were the two products specifically identified by product number in the original infringement contentions. Keranos agreed to dismiss with prejudice its patent infringement claims against those products (having determined that the potential damages recovery for those two products would be *de minimis*), and stipulated to summary judgment in favor of the defendants. The district court

then granted summary judgment for the manufacturers and entered final judgment against Keranos.

In the case against the customers, the district court denied Keranos's motion for leave to amend infringement contentions and Keranos's motion to reconsider on similar grounds. Again, Keranos agreed to dismiss with prejudice its patent infringement claims against the remaining products, and the district court granted summary judgment for the customers and entered final judgment against Keranos.

On appeal, Keranos contends that the district court abused its discretion in denying Keranos's motions for leave to amend infringement contentions. Appellees disagree, and further contend that Keranos lacked standing to sue for infringement of the asserted patents. Because we find Keranos has standing, we have jurisdiction under 28 U.S.C. § 1295(a)(1) to decide whether the district court abused its discretion in denying Keranos's motions for leave to amend infringement contentions.

DISCUSSION

I. Standing

Appellees contend that Keranos lacks standing to sue for past infringement of the asserted patents, which expired before Keranos acquired rights in the patents and before Keranos filed its complaint for patent infringement.

A. Legal Framework

“The question of standing to sue is a jurisdictional one, which we review *de novo*.” *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1551 (Fed. Cir. 1995) (en banc) (citations omitted). If Keranos lacked standing to sue in the district court, then jurisdiction is not proper on appeal. *Prima Tek II, LLC v. A-Roo Co.*, 222 F.3d 1372, 1376 (Fed. Cir. 2000).

“Standing to sue for patent infringement derives from the Patent Act, which provides that ‘[a] patentee shall have remedy by civil action for infringement of his patent.’” *Prima Tek II*, 222 F.3d at 1376–77 (quoting 35 U.S.C. § 281). A “patentee” can be the entity to whom the patent was issued or the successors in title. *Id.* at 1377 (citing 35 U.S.C. § 100(d)). When the entity that holds legal title to the patent “makes an *assignment of all substantial rights* under the patent,” then that assignee is “deemed the effective ‘patentee’ under 35 U.S.C. § 281” with effective title to the patent, and alone has “standing to maintain an infringement suit in its own name.” *Id.* (emphasis added).

“[A]n exclusive license may be tantamount to an assignment for purposes of creating standing if it conveys to the licensee all substantial rights to the patent at issue.” *Aspex Eyewear, Inc. v. Miracle Optics, Inc.*, 434 F.3d 1336, 1340 (Fed. Cir. 2006) (citing *Vaupel Textilmaschinen KG v. Meccanica Euro Italia SPA*, 944 F.2d 870, 875 (Fed. Cir. 1991)). If an exclusive licensee does not hold all substantial rights to the patent, however, then it lacks standing to maintain an infringement suit *in its own name*. In such a scenario, the exclusive licensee may have standing to participate in a patent infringement suit, but it must join the owner of legal title to satisfy the standing requirement. *Prima Tek II*, 222 F.3d at 1377. The patent owner is a necessary party in a suit brought by an exclusive licensee if “in [the patent owner’s] absence, the court cannot accord complete relief among existing parties,” or if the disposition of an action in the patent owner’s absence may “leave an existing party subject to a substantial risk of incurring double, multiple or otherwise inconsistent obligations.” Fed. R. Civ. P. 19(a); see *Crown Die & Tool Co. v. Nye Tool & Mach. Works*, 261 U.S. 24, 38 (1923).

In this case, UMC entered into an exclusive license with Keranos. The question for this Court is whether that

exclusive license assigned to Keranos all substantial rights to the patents. We look to the provisions of the exclusive license to determine if all substantial rights under the patent were assigned such that Keranos has standing to sue in its own name, or if UMC retained certain substantial rights such that Keranos should have joined UMC as a co-plaintiff below. *See Prima Tek II*, 222 F.3d at 1377–78.

B. All Substantial Rights

After “ascertain[ing] the intention of the parties [to the license agreement] and examin[ing] the substance of what was granted,” *Vaupel*, 944 F.2d at 874, we conclude that the exclusive license agreement between UMC and Keranos assigned all substantial rights under the patent to Keranos, without retaining any substantial rights in UMC, such that Keranos alone has standing to sue.

First, UMC transferred to Keranos the exclusive past, present, and future rights to sue and recover for infringement, to make, use, import, and sell products covered by the patents, and to negotiate and grant sublicenses.² The transfer of these rights strongly weighs in favor of finding Keranos alone has standing. *See Aspex*, 434 F.3d at 1342 (Transfer of “(1) the exclusive right to

² Because the patents had expired, when UMC and Keranos entered into their exclusive license, UMC had no present or future rights to sue and recover for infringement, to exclude others from making, using, importing, or selling products covered by the patents, or to negotiate and grant sublicenses. *See Kimble v. Marvel Entm’t, LLC*, 576 U.S. ___, 135 S. Ct. 2401, 2407 (2015). But this provision in the exclusive license further underscores UMC’s intention to transfer these rights and shows it intended to transfer to Keranos all substantial rights in the patents-at-issue.

make, use, and sell products covered by the patent; (2) the right to sue for infringement of the patent; and (3) a virtually unrestricted authority to sublicense its rights under the agreement . . . strongly favor[s] a finding of an assignment, not a license.”); *Alfred E. Mann Found. for Scientific Research v. Cochlear Corp.*, 640 F.3d 1354, 1361 (Fed. Cir. 2010) (“Frequently, though, the nature and scope of the exclusive licensee’s purported right to bring suit, together with the nature and scope of any right to sue purportedly retained by the licensor, is the most important consideration.”).

Importantly, UMC did not retain the right to sue accused infringers, which “is the most important factor in determining whether an exclusive license transfers sufficient rights to render the licensee the owner of the patent.” *Mann*, 640 F.3d at 1361. Instead, the agreement expressly prohibits UMC from instituting or participating in any law suit related to the patent, or from negotiating or granting further licenses to the patents, absent written authorization from Keranos.

Second, in a confidential provision, UMC transferred to Keranos an exclusive right that gave Keranos a proprietary interest in the patents. *Cf. Ortho Pharm. Corp. v. Genetics Inst., Inc.*, 52 F.3d 1026, 1034 (Fed. Cir. 1995) (“A patentee may not give a right to sue to a party who has no proprietary interest in the patent.” (citations omitted)); *Propat Int’l Corp. v. RPost, Inc.*, 473 F.3d 1187, 1191 (Fed. Cir. 2007) (“The responsibility to maintain a patent is one of the obligations that has been recognized by this court as an indication that the party with that obligation has retained an ownership interest in the patent.”) (citation omitted).

Finally, the agreement as a whole indicates that UMC intended to transfer all substantial rights to Keranos. *See Vaupel*, 944 F.2d at 874. The agreement includes a catch-all grant of “any and all other substantial rights . . .

necessary and sufficient under any applicable law or precedent to confer standing and permit [Keranos] to initiate any actions on its own.” The agreement, in a confidential provision, also placed a certain burden on UMC to ensure Keranos did not lack standing.

In sum, UMC transferred to Keranos all substantial rights remaining in the patents and retained no substantial rights for itself. Appellees concede that UMC possessed no other substantial rights to transfer to Keranos. Oral Arg. 26:43–27:55, *available at* <http://www.cafc.uscourts.gov/oral-argument-recordings/2014-1360/all>.

C. Mars, Inc. v. Coin Acceptors, Inc.

On appeal, appellees rely on our decision in *Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359 (Fed. Cir. 2008), to contend that, because UMC did not transfer to Keranos legal title to the expired patents, Keranos does not have standing to sue in its own name. Appellees argue that standing for expired and unexpired patents should be analyzed differently, because substantial rights no longer exist once a patent expires. *Mars*, however, suggests the opposite conclusion—that the same legal analysis applies to both expired and unexpired patents to determine whether an entity has standing to sue for patent infringement. As discussed below, this analysis does not require the holder of all substantial rights in the patent to also hold legal title in the patent to have standing when asserting either expired or unexpired patents.

In *Mars*, we held that an agreement that transferred only “any rights in or to past infringement” in a then-expired patent did not convey standing on the transferee. 527 F.3d at 1363–64, 1371–72. The transferee had argued that the transfer was “effectively the same as a transfer of title” because “the right to sue for past infringement is the ‘only remaining right[]’ in an expired patent.” *Id.* at 1372. This Court disagreed:

Title to a patent—even an expired patent—includes more than merely the right to recover damages for past infringement. Moreover, the transfer of the right to sue for past infringement divorced from title creates a risk of unnecessary third-party litigation, whether or not the patent has expired.

Id. (citing *Crown Die & Tool*, 261 U.S. at 39).

Mars does *not*, contrary to appellees' contention, stand for the proposition that only the person who holds legal title to an expired patent has standing to sue for past infringement. *Mars*'s discussion of "[t]itle to a patent" does not distinguish between expired and unexpired patents. Rather, *Mars* merely reiterates the established rule that for any patent, expired or not, transferring only the right to sue for past damages, divorced from title, is not enough to give the owner of that right standing under the Patent Act. See *Crown Die*, 261 U.S. at 44 ("If the owner of the patent when the infringements took place has assigned his patent to one, and his claims for damages for infringement to another, then the latter cannot sue at law at all but must compel his assignor of the claims to sue for him.").

Requiring that legal title in an expired patent be transferred to convey standing on the transferee would create separate standing rules for expired and unexpired patents. In other words, if Keranos had entered into the present exclusive license agreement the day before the patents expired, then it would have standing based on our "all substantial rights" rule, but appellees ask us to rule differently if Keranos acquired the same rights one day later. We see no reason for a party's standing to turn on whether it enters into an exclusive license with a patent owner before or after the patent expires.

We acknowledge that the patentee has fewer rights to transfer when the patent has expired; for example, the

patentee can no longer transfer the right to exclude others from practicing the patent going forward. But the absence of some rights in an expired patent does not affect the standing of a transferee that received all substantial rights in an expired patent, just as it does not divest of standing the transferor that did not contract away any substantial rights. The crux of our standing caselaw has always been whether a plaintiff has all substantial rights in the patent-at-issue. *Mars* asks us to examine whether the licensor intended to transfer all substantial rights or merely a subset of those rights. As discussed above, the title holder, UMC, retained nothing that can be regarded as a substantial right and nothing in the agreement suggests it intended to retain any substantial right.

The policy discussed in *Mars* of avoiding “unnecessary third-party litigation, whether or not the patent has expired” further confirms that Keranos alone has standing because the patent owner, UMC, transferred to Keranos all rights to pursue any infringement litigation. As explained in *Crown Die*, if a patentee was allowed to divide up the existing patent rights in order to “give[] to many different individuals the right to sue certain named infringers . . . , it would give the patentee an opportunity without expense to himself to stir up litigation by third persons that is certainly contrary to the purpose and spirit of the statutory provisions for the assigning of patents.” 261 U.S. at 39; *see Vaupel*, 944 F.2d at 875 (“The policy underlying the requirement to join the owner when an exclusive licensee brings suit is to *prevent the possibility of two suits on the same patent against a single infringer.*” (emphasis added) (citing *Crown Die*, 261 U.S. at 38)). Our finding that Keranos alone holds all rights to pursue infringement litigation for the patents-at-issue advances this policy concern.

In sum, we conclude that Keranos has standing alone to sue for infringement of the asserted patents and decline to create one test for establishing standing when an

unexpired patent has been transferred and a second test for establishing standing when an expired patent has been transferred.

II. Compliance with Local Patent Rules

Having determined that Keranos has standing, we turn to the merits of its appeal: the district court's denial of Keranos's motions for leave to amend infringement contentions. The district court held that Keranos's amended infringement contentions, which "would add thousands of additional products not specifically disclosed in [Keranos's] original infringement contentions," did not meet the requirements of the local patent rules. J.A. 6–8. To justify its identification of new products in its amended infringement contentions, Keranos argued that it needed discovery to obtain the information required about those products, because publicly available information was insufficient for it to identify products that contained the allegedly infringing technology. Keranos also argued that the amended infringement contentions did not add any new patent claims or infringement theories because each of the new products fell within the scope of the original infringement contentions, which generally identified products that "incorporated the SuperFlash technology." J.A. at 6.

The district court disagreed with Keranos that the type of information in public documents was insufficient to identify whether the product potentially infringed, noting that Keranos's original infringement contentions used public documents containing that same type of information to identify the accused products. The district court also found that, under the local rules, Keranos had to identify the accused products by specific product name or number, if known, rejecting Keranos's contention that it complied with the local rules by identifying product families or describing allegedly infringing technology incorporated in various, unidentified products. The

district court concluded that Keranos “failed to demonstrate that it acted diligently in searching for and naming the additional products that incorporate the accused technology” when it drafted its original infringement contentions, given that Keranos had the burden “to search for and identify infringing products to the extent possible based on publicly available information.” J.A. 7–8 (citing *Am. Video Graphics, L.P. v. Elec. Arts, Inc.*, 359 F. Supp. 2d 558, 560 (E.D. Tex. 2005) (“The Patent Rules demonstrate high expectations as to plaintiffs’ preparedness before bringing suit, requiring plaintiffs to disclose their preliminary infringement contentions before discovery has even begun.”)).

In the Eastern District of Texas, Patent Rule 3-1 requires the patent owner to serve infringement contentions that, among other things, identify “as specific[ally] as possible” each accused product. The rule further requires that the patent owner identify the name or model number, *if known*, of each accused product. The purpose of this rule, and the local patent rules in general, is to “require parties to crystallize their theories of the case early in the litigation” so as to “prevent the ‘shifting sands’ approach to claim construction.” *O2 Micro Int’l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1364 (2006) (quoting *Atmel Corp. v. Info. Storage Devices, Inc.*, No. C 95–1987 FMS, 1998 WL 775115, at *2 (N.D. Cal. Nov. 5, 1998)) (referring to the local patent rules of the Northern District of California, which are the same as the local patent rules of the Eastern District of Texas in relevant part, *see STMicronelectronics, Inc. v. Motorola, Inc.*, 308 F. Supp. 2d 754, 756 n.1 (E.D. Tex. 2004) (“Although the Northern District of California’s opinion is not binding on this Court, it is persuasive because the relevant portions of the Court’s Patent Rule 3-1 are exactly the same as that court’s Patent LR 3-1.”)). With one exception not at issue here, the local rules only allow the patent owner to amend its infringement contentions by

order of the court upon a showing of good cause, which requires diligence in discovering the additional products and in seeking to amend. *Alexsam Inc. v. IDT Corp.*, No. 2:07-cv-420-CE, 2011 WL 108725, at *1 (E.D. Tex. Jan. 12, 2011). To determine whether the patent owner has shown good cause to amend its infringement contentions, the Eastern District of Texas considers “(1) the explanation for the party’s failure to meet the deadline, (2) the importance of what the Court is excluding, (3) the potential prejudice if the Court allows that thing that would be excluded, and (4) the availability of a continuance to cure such prejudice.” *Id.*

Local patent rules are essentially a series of case management orders that fall within a district court’s broad power to control its docket and enforce its order. *See O2 Micro*, 467 F.3d at 1363; *STMicroelectronics, Inc. v. Motorola, Inc.*, 307 F. Supp. 2d 845, 848 (E.D. Tex. 2004). A district court’s application of its local rules is reviewed under the standard of abuse of discretion. *AntiCancer, Inc. v. Pfizer, Inc.*, 769 F.3d 1323, 1328 (Fed. Cir. 2014). “In reviewing a district court’s exercise of discretion, this court determines ‘whether (1) the decision was clearly unreasonable, arbitrary, or fanciful; (2) the decision was based on an erroneous conclusion of law; (3) the court’s findings were clearly erroneous; or (4) the record contains no evidence upon which the court rationally could have based its decision.’” *Genentech, Inc. v. Amgen, Inc.*, 289 F.3d 761, 774 (Fed. Cir. 2002) (quoting *In re Cambridge Biotech Corp.*, 186 F.3d 1356, 1369, 51 USPQ2d 1321, 1329 (Fed. Cir. 1999)).

A. Identification of Accused Products

Keranos argues that the district court abused its discretion in denying Keranos’s motions for leave to amend infringement contentions because, by identifying the accused technology (*i.e.*, “SuperFlash”), certain product families, and certain product numbers in the original

infringement contentions, Keranos gave appellees sufficient notice of its theory of infringement. Keranos acknowledges that Patent Rule 3-1(b) requires that it identify each product by product name or model number, if known, but Keranos asserts that the local rules allow for the addition of new products to the infringement contentions if those products operate in a manner reasonably similar to the specific theory of infringement identified in the original infringement contentions.

Keranos's infringement contention against Microchip is representative:

Based on the current investigation, without the advantage of discovery, Microchip (or foundries on their behalf) made, used, sold, offered for sale or imported SuperFlash [integrated circuits] under license from SST, including but not limited to the PIC18; PIC24; dsPIC DSCs; PIC32 and related family of products which are said to include SuperFlash memory.

J.A. 21552. According to Keranos, the term "SuperFlash" refers to a narrow group of products with flash memory, and the contentions alleged that (1) the manufacturer-appellees obtained licenses and the know-how to make SuperFlash memory from SST and (2) the alleged customer-appellees selected SuperFlash memory for their products. Keranos points out that the appellees' non-infringement positions analyzed SuperFlash only generally, rather than asserting distinct non-infringement positions for their specific products. Keranos concludes that its infringement theory requires only use of the SuperFlash technology, and that the new products all use SuperFlash.

Keranos's infringement contentions also identified certain product families as infringing the asserted patents. For example, in the infringement contention excerpt above, Keranos identified Microchip's PIC18, PIC24,

dsPIC DSCs, and PIC32 product families as accused products. Keranos argues that identifying product family numbers was sufficient, because appellees referenced their products by family numbers in responding to discovery requests, and the product family number was the most specific information Keranos could find in publicly available documents for some of the appellees.

Appellees disagree that Keranos's identification of SuperFlash technology and certain product families sufficiently disclosed its theory of infringement. Appellees first argue that if Keranos had identified additional products, it would have further defined Keranos's theories of direct infringement because different products allegedly perform certain steps of the asserted method in different ways. Second, appellees argue that the identification of additional products would have in turn prompted inquiries into the specific activities and specific intent required to prove indirect infringement. Finally, appellees argue that the identification of additional products could have revealed Keranos's specific damages allegations, as SuperFlash memory can be incorporated into increasingly larger products. Additional information about the amount of potential damages, according to appellees, would then inform early decisions relating to settlement.

Like the district court, appellees also focus on the requirement of Patent Rule 3-1(b) that the accused products be identified "as specific[ally] as possible" and "by name . . . or number, if known." Appellees argue that Keranos's failure to search for and identify products using information publicly available at the time it filed its original infringement contentions precludes Keranos from amending its infringement contentions to add those products.

We hold that the district court did not abuse its discretion in requiring Keranos to "demonstrate that it acted diligently in searching for and naming the additional

products that incorporate the accused technology” in its initial infringement contentions. J.A. 7–8 (citing *Am. Video Graphics*, 359 F. Supp. 2d at 560). The local patent rules require that the patent owner identify in its infringement contentions each accused product “of which [it] is aware . . . as specific[ally] as possible,” which requires identifying each product “by name or model number, if known.” Local Patent Rule 3-1(b). In most cases, if the patent owner wishes to add additional products to its infringement contentions, it must seek leave of court, which “shall only be entered upon a showing of good cause.” Local Patent Rule 3-6(b).

In the Eastern District of Texas, good cause requires the patent owner to demonstrate, *inter alia*, that it was diligent in discovering the products it wishes to add to its infringement contentions. See J.A. 6 (citing *West v. Jewelry Innovations, Inc.*, No. C 07-1812 JF, 2008 WL 4532558, at *2 (N.D. Cal. Oct. 8, 2008) (“[T]he Court also must address whether the party was diligent in discovering the basis for the proposed amendment.”)). Although a district court, depending on the circumstances, might not require that the patent owner identify each accused product by name or model number, a district court is well within its discretion to refuse the patent owner’s request to amend infringement contentions if the patent owner does not show that it acted diligently in its identification of accused products, which may require the identification of products by name or model number. Compare *Linex Techs., Inc. v. Belkin Int’l, Inc.*, 628 F. Supp. 2d 703, 711 (E.D. Tex. 2008) (“[U]sing an exemplary product to outline infringement contentions can be sufficient.”), with *SmartPhone Techs. LLC v. HTC Corp.*, No. 6:10-cv-580, 2012 WL 1424173, at *3 (E.D. Tex. Mar. 16, 2012) (denying-in-part motion for leave to amend infringement contentions as to the products for which the accused infringer did not dispute that public information was available).

B. Publicly Available Information

Keranos next argues that its original infringement contentions identified as specifically as possible each accused product of which it was aware. To show its diligence, Keranos submitted a declaration from its principal, Nicholas Gross, that detailed the number of hours spent reviewing datasheets, reverse-engineering products, and searching public information sources to identify potentially infringing products. J.A. 1142–43. Keranos asserts that much of the publicly available information was insufficient to identify accused products, because it did not indicate whether the products were available during the 2004 to 2008 period for which Keranos alleged damages or whether the products had SuperFlash memory, instead of the more generic “flash” memory. The public documents that identified only “flash” memory were insufficient to accuse the products of infringing the asserted patents because, according to Keranos, SuperFlash refers to a narrow subset of flash products, while Keranos’s efforts to reverse-engineer some “flash” memory products did not consistently identify the use of SuperFlash memory. Keranos argues that the local patent rules do not require that it reverse-engineer all of the thousands of potentially infringing products. *See STMicroelectronics*, 308 F. Supp. 2d at 755 (“[T]he question of whether [the disclosing party] conducted ‘reverse engineering or its equivalent’ is not synonymous with whether it has complied with Patent [Rule] 3-1, which, as discussed, requires only to set forth specific theories of infringement.” (quoting *Network Caching Tech., LLC v. Novell, Inc.*, No. C-01-2079, 2003 WL 21699799, *4–5 (N.D. Cal. Mar. 21, 2003))).

Keranos further asserts that publicly available information did not exist for some of appellees’ products. For example, the parties agree that TSMC’s product numbers cannot be identified by public sources. *See* J.A. 1819 (appellees’ opposition to Keranos’s motions for leave to

amend infringement contentions, stating that “Keranos could have identified virtually all of the products it seeks to add had it exercised diligence in the two years after it filed the complaint (with TSMC as an exception)”. Keranos also suggests that because Samsung did not oppose its motions for leave to amend infringement contentions, there is no evidence that any Samsung product could have been identified in the original infringement contentions using publicly available information.

Appellees respond that because Keranos did not perform a sufficient search for publicly available information prior to serving its original infringement contentions, it is irrelevant whether information was publicly available or not. To support this contention, appellees point to public documents for some of the new products in Keranos’s amended infringement contentions that mention the word “SuperFlash.” Appellees also point to public documents for some of the new products that, while they do not mention SuperFlash technology, contain the same type of information as the documents Keranos relied on to accuse the products in its original infringement contention.

In denying Keranos’s motions for leave to amend infringement contentions, the district court found that Keranos had not shown it diligently searched for and identified infringing products based on all the publicly available information. J.A. 8. The record indicates, however, that publicly available information might not have been available for the products of some appellees and, thus, Keranos could not have been more diligent with respect to those appellees. We therefore vacate and remand the district court’s order denying Keranos’s motions for leave to amend infringement contentions. On remand, the district court should consider, on at least a party-by-party basis, whether Keranos has shown good cause to amend its infringement contentions.

Importantly, we do not hold that the district court must determine whether Keranos has shown good cause to amend its infringement contentions on a product-by-product basis, although the district court may deem it necessary to do so. We recognize that analyzing documents on a product-by-product basis might place an undue strain on the judicial resources of the district court, particularly here, where thousands of products are at issue. We also recognize that district courts have broad discretion to manage their cases, and we therefore limit our holding to the specific facts of this case. The circumstances presented in other cases may require that a district court look at each new product in proposed amended infringement contentions to determine whether a patent owner satisfied the local rules. Here, however, if a company makes product numbers publicly available as a general practice, the newly accused product names and numbers appear to follow this general practice, and public information accompanying those product numbers would have allowed Keranos to identify that those products included the accused technology, the district court may well be within its discretion to refuse to allow Keranos to add to its contentions a handful of products for which it claims there was no publicly available information.

* * *

Because we vacate the district court's denial of Keranos's motions to amend infringement contentions, we need not consider Keranos's arguments that it had good cause for amending its infringement contentions, or that the district court's denial amounted to improper sanctions.

CONCLUSION

Keranos has standing to sue for infringement of the asserted patents because it owns all substantial rights in those patents. Regarding the district court's order denying Keranos's motions for leave to amend infringement contentions, we cannot determine from the order whether

the district court exceeded its discretion by denying Keranos's motions with respect to all of the differently situated appellees. We therefore vacate the judgment below and remand with instructions to determine, on a party-by-party basis, whether Keranos violated the local patent rules.

VACATED AND REMANDED

COSTS

Each party shall bear its own costs.