

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

WI-FI ONE, LLC,
Appellant

v.

BROADCOM CORPORATION,
Appellee

**ANDREI IANCU, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,**
Intervenor

2015-1944

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2013-
00601.

Decided: April 20, 2018

DONALD PUCKETT, Nelson Bumgardner PC, Fort
Worth, TX, for appellant. Also represented by DOUGLAS
AARON CAWLEY, McKool Smith, PC, Dallas, TX; PETER J.
AYERS, Law Office of Peter J. Ayers, Austin, TX.

DOMINIC E. MASSA, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, for appellee. Also represented by KEVIN GOLDMAN, KATIE SAXTON.

NATHAN K. KELLEY, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, for intervenor. Also represented by KAKOLI CAPRIHAN, BENJAMIN T. HICKMAN, THOMAS W. KRAUSE, FRANCES LYNCH; JOYCE R. BRANDA, MARK R. FREEMAN, MELISSA N. PATTERSON, NICHOLAS RILEY, Appellate Staff, Civil Division, United States Department of Justice, Washington, DC.

Before DYK, BRYSON, and REYNA, *Circuit Judges*.

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

Dissenting opinion filed by *Circuit Judge* REYNA.

BRYSON, *Circuit Judge*.

These three consolidated cases return to the panel on remand from the en banc court. That court reviewed, and overturned, the panel's decision that time-bar determinations by the Patent Trial and Appeal Board ("PTAB" or "Board") in inter partes review proceedings are not appealable. *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364 (Fed. Cir. 2018) (en banc).

The three cases are related appeals from decisions of the PTAB. In each case, the Board held various claims of three patents owned by Wi-Fi One, LLC ("Wi-Fi"), to be invalid for anticipation.

This panel initially wrote a precedential opinion in appeal No. 2015-1944, and decided Appeal Nos. 2015-1945 and 2015-1946 by summary affirmance. *See Wi-Fi One, LLC v. Broadcom Corp.*, 837 F.3d 1329 (Fed. Cir. 2016); *Wi-Fi One, LLC v. Broadcom Corp.*, No. 2015-1945, 668 F.

App'x 893 (Fed. Cir. 2016); *Wi-Fi One, LLC v. Broadcom Corp.*, No. 2015-1946, 668 F. App'x 893 (Fed. Cir. 2016).

Although the en banc court vacated the panel's judgments in all three cases, the en banc opinion addressed only the appealability of the PTAB's time-bar determination under 35 U.S.C. § 315(b). The court did not address the remaining portions of the panel's decision in Appeal No. 2015-1944 or the aspects of the summary affirmances in Appeal Nos. 2015-1945 and 2015-1946 that related to the merits of Wi-Fi's appeals.

The panel now reaffirms the portions of its three prior decisions that were left unaffected by the en banc court's decision. Accordingly, in Appeal No. 2015-1944, parts III and IV of the original panel opinion are reinstated and are reproduced in substance as parts III and IV of this opinion. In part II of this opinion, the panel addresses the merits of Wi-Fi's time-bar claim that the en banc court held to be appealable. On that issue, we affirm the decision of the PTAB. In separate orders, we reinstate the summary affirmances of the PTAB's decisions in Appeal Nos. 2015-1945 and 2015-1946. Because the time-bar issue raised in those cases is identical to the time-bar issue raised in Appeal No. 2015-1944, we affirm the PTAB's decision as to the time-bar issue in those cases as well.

I

A

The patent at issue in this case, U.S. Patent No. 6,772,215 ("the '215 patent"), is directed to a method for improving the efficiency by which messages are sent from a receiver to a sender in a telecommunications system to advise the sender that errors have occurred in a particular message.

In the technology described in the patent, data is transmitted in discrete packets known as Protocol Data

Units (“PDUs”). The useful data or “payload” in those packets is carried in what are called user data PDUs (“D-PDUs”). Each D-PDU contains a sequence number that uniquely identifies that packet. The sequence number allows the receiving computer to determine when it either has received packets out of order or has failed to receive particular packets at all, so that the receiver can correctly combine the packets in the proper order or direct the sender to retransmit particular packets as necessary.

The receiver uses a different type of packet, a status PDU (“S-PDU”), to notify the sender of the D-PDUs it failed to receive. The ’215 patent is concerned with organizing the information contained in S-PDUs efficiently so as to minimize the size of the S-PDUs, thus conserving bandwidth.

The patent discloses a number of methods for encoding the sequence numbers of missing packets in S-PDUs. Some of those methods use lists that indicate which packets are missing by displaying the ranges of the sequence numbers of the missing packets. Other methods are based on bitmaps that use binary numbers to report on the status of a fixed number of packets relative to a starting point.

Depending on how many packets fail to be properly delivered and the particular sequence numbers of the errant packets, different methods can be more or less efficient for encoding particular numbers and ranges of errors. In order to leverage the benefits of the different encoding methods, the patent discloses an S-PDU that can combine multiple message types in an arbitrary order, with “no rule on the number of messages or the type of message that can be included in the S-PDU.” ’215 patent, col. 7, ll. 55-57. Using that technology, S-PDUs can be constructed with a combination of the encoding types best suited for the particular errors being encoded,

so that the S-PDU can be more compact than an S-PDU that uses a single encoding type.

B

In 2010, Wi-Fi's predecessors, Ericsson, Inc., and Telefonaktiebolaget LM Ericsson (collectively, "Ericsson") filed a patent infringement action against D-Link Systems, Inc., and several other defendants in the United States District Court for the Eastern District of Texas. Ericsson alleged infringement of the '215 patent and eight other patents. Following a jury trial, that case resulted in a judgment of infringement as to the '215 patent and two other patents, U.S. Patent Nos. 6,424,625 ("the '625 patent") and 6,566,568 ("the '568 patent"). *See generally Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201 (Fed. Cir. 2014).¹

In 2013, shortly after judgment was entered in the district court action, Broadcom petitioned for inter partes review of the '215 patent, the '625 patent, and the '568 patent. Broadcom was the manufacturer of two chips that formed the basis for some of the infringement allegations in the district court case, but Broadcom was not a defendant in that litigation. The inter partes review proceeding at issue in this case (PTAB No. IPR2013-00601) concerned the '215 patent. The '568 patent was at issue in PTAB No. IPR2013-00602, which is the subject of Appeal No. 2015-1945 in this court, and the '625 patent was at issue in PTAB No. IPR2013-00636, which is the subject of Appeal No. 2015-1946 in this court.

¹ During the proceedings before the PTAB, Ericsson assigned its interest in the '215 patent to Wi-Fi. For simplicity, Wi-Fi will be referred to as the patent owner throughout this opinion.

At the outset of the PTAB proceedings, Wi-Fi sought to bar Broadcom from obtaining inter partes review of the '215 patent. Wi-Fi contended that some or all of the defendants in the D-Link case were in privity with Broadcom or were real parties in interest in the inter partes review proceeding brought by Broadcom. Because the D-Link defendants would be time-barred from seeking inter partes review under 35 U.S.C. § 315(b), Wi-Fi argued that Broadcom's petition should be time-barred as well. The Board rejected that argument, holding that the evidence did not show either that Broadcom was in privity with any of the D-Link defendants or that any D-Link defendant was a real party in interest in the inter partes review proceeding.

The Board then instituted inter partes review of the '215 patent, finding that there was a reasonable likelihood that the challenged claims were anticipated by U.S. Patent No. 6,581,176 to Seo. The Board declined to institute review based on another reference that the Board considered redundant in light of Seo.

Seo teaches improvements to what are known as negative acknowledgement ("NAK") frames. NAK frames are sent by the receiving unit to inform the transmitting unit that frames sent by the transmitting unit were misdelivered. The Seo method uses a single packet to provide information about multiple misdelivered frames, so that "only one NAK control frame for all missed user data frames is transmitted to a transmitting station to require a retransmission of the missed user data when a timer for an NAK is actually expired." Seo, col. 5, ll. 32-35.

Seo describes the structure of the disclosed NAK frames. The frames include a field called "NAK_TYPE" that indicates how the NAK frame represents missing frames. If the NAK_TYPE is set to "00," then the missing frames are encoded as a list, and the frame requests retransmission of all user data frames between the first

missing frame and the last, represented by the “FIRST” and “LAST” values. If the NAK_TYPE is set to “01,” then the NAK frame transmits information about the missing transmitted frames using a bitmap. In that case, the NAK frame contains the field “NAK_MAP_SEQ” to identify the starting point of the bitmap and the field “NAK_MAP” to transmit the bitmap.

Before the Board, Wi-Fi argued that the NAK_TYPE field disclosed in Seo is not a “type identifier field” and that Seo therefore does not satisfy the type identifier field limitation of the ’215 patent. Wi-Fi further argued that, even if Seo discloses that feature, the NAK_TYPE field is not found within a “message field,” as required by the claims at issue. The Board rejected those arguments, found that Seo disclosed all the limitations of the challenged claims of the ’215 patent, and therefore held those claims to be unpatentable. The Board also rejected Wi-Fi’s argument that claim 15 of the ’215 patent required some sort of “length field,” which Seo did not disclose. Finally, the Board held that Wi-Fi had not shown that Broadcom was in privity with the D-Link defendants, and therefore Broadcom was not barred from filing a petition for inter partes review.

II

On appeal, Wi-Fi reprises the argument that Broadcom’s petition for inter partes review is time-barred. Wi-Fi points out that the D-Link defendants would have been barred from seeking inter partes review of any of the claims at issue in the district court litigation because they did not petition for inter partes review within one year of the date on which they were served with the complaint in the district court action. *See* 35 U.S.C. § 315(b). Under that statute, Wi-Fi argues that Broadcom’s petition for inter partes review should have been dismissed because one or more of the D-Link defendants was in privity with

Broadcom or was a real party in interest in the inter partes review proceeding.

Section 315(b) provides, in pertinent part: “An inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent.” The use of the familiar common law terms “privy” and “real party in interest” indicate that Congress intended to adopt common law principles to govern the scope of the section 315(b) one-year bar. *See Beck v. Prupis*, 529 U.S. 494, 500-01 (2000) (“[W]hen Congress uses language with a settled meaning at common law, Congress ‘presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken’” (quoting *Morrisette v. United States*, 342 U.S. 246, 263 (1952))); *see also* 154 Cong. Rec. S9987 (daily ed. Sept. 27, 2008) (statement of Sen. Kyl) (“The concept of privity, of course, is borrowed from the common law of judgments.”).

To determine whether a petitioner is in privity with a time-barred district court litigant, the Board conducts a “flexible” analysis that “seeks to determine whether the relationship between the purported ‘privy’ and the relevant other party is sufficiently close such that both should be bound by the trial outcome and related estoppels.” Patent and Trademark Office (“PTO”), Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012); *see also id.* (“Privity is essentially a shorthand statement that collateral estoppel is to be applied in a given case” (quoting 154 Cong. Rec. S9987 (daily ed. Sept. 27, 2008) (statement of Sen. Kyl))). To decide whether a party other than the petitioner is the real party in interest, the Board seeks to determine whether some party other than the petitioner is the “party or parties at whose behest the petition has been filed.” *Id.* at 48,759.

“[A] party that funds and directs and controls an IPR or [post-grant review] proceeding constitutes a ‘real party-in-interest,’ even if that party is not a ‘privy’ of the petitioner.” *Id.* at 48,760.

The interpretation of the concepts of privity and real party in interest set forth in the PTO’s Office Trial Practice Guide and applied by the Board is consistent with general legal principles. *See Taylor v. Sturgell*, 553 U.S. 880, 893-95 & n.8 (2008) (Privity is “a way to express the conclusion that nonparty preclusion is appropriate on any ground”; “a nonparty is bound by a judgment if she ‘assume[d] control’ over the litigation in which that judgment was rendered.”); *see also* 18A Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, *Federal Practice and Procedure* § 4451, at 356 (3d ed. 2017) (“[I]t should be enough that the nonparty has the actual measure of control or opportunity to control that might reasonably be expected between two formal coparties.”).²

A

On the merits of the section 315(b) issue, Wi-Fi first argues that the Board applied the wrong legal standard when it determined that no district court defendant was either a privy of Broadcom or a real party in interest in the inter partes review proceeding. Specifically, Wi-Fi argues that the Board improperly required Wi-Fi to satisfy “a hard and absolute requirement that Broadcom must have had the right to control the District Court Litigation in order to find that a District Court Defendant was a real party in interest or privy,” and that the Board

² Wi-Fi has not taken issue with the analysis of the requirements to establish privity or real party in interest status under section 315(b) as set forth in the PTO’s Office Trial Practice Guide.

“made it abundantly clear that it viewed the District Court Defendants’ right to control this IPR to be of no importance whatsoever.” Under the Board’s legal test, according to Wi-Fi, “it is irrelevant if a District Court Defendant has an absolute right to control Broadcom’s conduct of the IPR (and even if it has been exercising actual control all along, such that Broadcom is a mere shill).”

Wi-Fi mischaracterizes the Board’s decisions regarding section 315(b). Contrary to Wi-Fi’s contention, the Board recognized that there are a number of circumstances in which privity might be found, including when the nonparty controlled the district court litigation. The Board’s decision to focus on that ground was in response to the specific arguments that Wi-Fi raised on the privity issue.

In its motion for additional discovery, Wi-Fi began by noting that the Supreme Court in *Taylor* set forth six factors to consider in determining whether a nonparty to an action is bound by the judgment in the action. Wi-Fi argued that this case was governed by the factors providing for nonparty preclusion based on a pre-existing “substantive legal relationship” with a party to the action and the opportunity to control the litigation. In particular, Wi-Fi argued that the evidence would show that, by virtue of its indemnity relationship with at least two of the D-Link defendants, Broadcom “had the opportunity to control and maintains a substantive legal relationship with the D-Link Defendants sufficient to bind Broadcom to the District Court’s judgment.”

In its decision on Wi-Fi’s motion, the Board first observed that privity depends on “whether the relationship between a party and its alleged privity is ‘sufficiently close such that both should be bound by the trial outcome and related estoppels.’” The Board further noted that “[d]epending on the circumstances, a number of factors

may be relevant to the analysis, including whether the non-party ‘exercised or could have exercised control over a party’s participation in a proceeding,’ and whether the non-party is responsible for funding and directing the proceeding.”

Turning to Wi-Fi’s argument, the Board stated that “[w]hen a patent holder sues a dealer, seller, or distributor of an accused product, as is the case at hand, indemnity payments and minor participation in a trial are not sufficient to establish privity between the non-party manufacturer of the accused device and the defendant parties.” The Board added that the fact that Broadcom filed an amicus curiae brief in the appeal from the district court judgment “shows interest in the outcome,” but “does not bind Broadcom to the trial below outcome or show that Broadcom exercised control over that outcome.” Nor did Broadcom’s litigation activity in another forum or its filing a petition for inter partes review “show control of the Texas Litigation or otherwise show that Broadcom would be bound by that outcome.”

In its request for rehearing of the Board’s discovery order, Wi-Fi argued that it was error for the Board to require a showing that Broadcom controlled the Texas litigation; according to Wi-Fi, a “community of interest” was sufficient to establish privity. Responding to that argument, the Board noted that the PTO’s Office Patent Trial Practice Guide “emphasizes control, which implies that control is an important factor to establish privity.”

Finally, in its request for rehearing of the Board’s Final Written Decision, Wi-Fi again argued that the Board had erred in “applying a legal standard imposing an inflexible standard requiring that Petitioner must have exercised control over the District Court Defendants in the District Court Litigation.” In addition, Wi-Fi argued that the Board had neglected to address the “real-party-in-interest” issue. Wi-Fi contended that under the

Board's standard, Broadcom's petition would not be barred "even if there were irrefutable evidence that the District Court Defendants had expressly hired Broadcom to file this IPR petition, and that the District Court Defendants were paying for and controlling every aspect of Broadcom's IPR activity."

In its decision on Wi-Fi's request for rehearing, the Board explained that it had previously focused primarily on Broadcom's "exercise of control, or opportunity to exercise control over the prior District Court lawsuit" because that was the focus of Wi-Fi's argument. The Board went on to say that its earlier decisions "did not characterize the legal standard, for all cases, as being limited strictly to a petitioner's control, or opportunity to control, a non-party in previous litigation." The Board explained that, in its previous decisions in the case, it had addressed Wi-Fi's theory "that the indemnity agreements imply that the District Court Defendants are real parties in interest in these *inter partes* reviews."

The Board thus made clear that it understood that privity and real-party-in-interest status could be established not only by Broadcom's exercise of control over the district court proceedings, but also by the D-Link defendants' exercise of control over the *inter partes* review proceeding. In sum, a review of the Board's decisions in this case, in the context of the arguments Wi-Fi made at each stage, show that the Board did not apply a legally erroneous standard in deciding the "real party in interest, or privity" issue.³

³ The dissent faults the Board for not discussing all of the *Taylor* factors bearing on a finding of privity. But the Board properly focused on the factors that Wi-Fi raised in its argument. While it recognized that a variety

B

Wi-Fi next contends that the Board improperly denied its requests for discovery of evidence such as the indemnity agreements between Broadcom and two of the D-Link defendants. That evidence, according to Wi-Fi, would have established that Broadcom and those defendants were in privity or that those defendants were real parties in interest in the IPR proceeding.

Discovery in inter partes review proceedings is more limited than in proceedings before district courts or even other proceedings before the PTO. By statute, the Director of the PTO is authorized to prescribe regulations “setting forth standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—(A) the deposition of witnesses submitting affidavits or declarations; and (B) what is otherwise necessary in the interest of justice.” 35 U.S.C. § 316(a)(5). The legislative history of the America Invents Act confirms that “[g]iven the time deadlines imposed on these proceedings,” it was intended that the PTO would “be conservative in its grants of discovery.” 154 Cong. Rec. S9988-89 (daily ed. Sept. 27, 2008) (remarks of Sen. Kyl).

By regulation, the Board has provided for limited mandatory discovery, as well as a category called “additional discovery.” 37 C.F.R. § 42.51. The discovery sought by Wi-Fi did not qualify as mandatory discovery and therefore was allowable, if at all, only as “additional discovery.” The Board’s rules provide that a party seeking additional discovery “must show that such additional discovery is in the interests of justice.” *Id.* § 42.51(b)(2)(i). That standard is more restrictive than the “good cause”

of factors can contribute to a finding of privity, it limited its discussion to the arguments made by Wi-Fi.

standard that applies in post-grant review and covered business method proceedings. Office Patent Trial Practice Guide, 77 Fed. Reg. at 48,761. Additional discovery, the Board has ruled, should be confined to “particular limited situations, such as minor discovery that PTO finds to be routinely useful, or to discovery that is justified by the special circumstances of the case.” *Apple Inc. v. Achates Reference Publ’g Inc.*, No. IPR2013-00080, 2013 WL 6514049, at *2 (PTAB Apr. 3, 2013) (quoting 154 Cong. Rec. S9988-89 (daily ed. Sept. 27, 2008) (remarks of Sen. Kyl)).

After Broadcom petitioned for inter partes review, Wi-Fi moved for additional discovery under 37 C.F.R. § 42.51(b). In its motion, Wi-Fi argued that the evidence would show that “Broadcom is in privity with at least one D-Link Defendant.” Wi-Fi cited evidence that at least two of the defendants had indemnity agreements with Broadcom, that Broadcom had communicated with some of the D-Link defendants during that litigation, and that, more generally, “Broadcom has been working behind the scenes to help defeat Ericsson’s infringement claims against its customers.” That level of coordination, Wi-Fi contended, “raises serious questions about whether Broadcom is in privity with the defendants and is likewise time barred from filing these petitions by § 315(b).”

Wi-Fi requested a variety of documents, including any indemnity agreements, joint defense agreements, or other agreements relating to cooperation between Broadcom and any of the D-Link defendants. Wi-Fi also sought any correspondence between Broadcom and any of the D-Link defendants relating to (1) the filing of Broadcom’s petitions for inter partes review; (2) possible intervention by Broadcom in the D-Link litigation; (3) claim construction or interpretation of any of the patents at issue in that litigation; and (4) the validity or invalidity of any of the patents at issue in that litigation.

Under the Board's procedures, the burden is on the party seeking discovery to show that the requested discovery would be likely to produce favorable evidence. 37 C.F.R. § 42.51(b)(2) ("The moving party must show that such additional discovery is in the interests of justice."); *Apple Inc.*, 2013 WL 6514049, at *2; *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, No. IPR2012-00001, 2013 WL 11311697, at *3 (PTAB Mar. 5, 2013) ("[T]he requester of information should already be in possession of a threshold amount of evidence or reasoning tending to show beyond speculation that something useful will be uncovered. 'Useful' in that context does not mean merely 'relevant' and/or 'admissible.' In [context], 'useful' means favorable in substantive value to a contention of the party moving for discovery.").

The Board decided that Wi-Fi had not met that standard, and therefore denied discovery. The Board's administration of its rules for trial proceedings is reviewed for an abuse of discretion. *Ultratec, Inc. v. CaptionCall, LLC*, 872 F.3d 1267, 1272 (Fed. Cir. 2017); *Redline Detection, LLC v. Star Envirotech, Inc.*, 811 F.3d 435, 442 (Fed. Cir. 2015).

On appeal, Wi-Fi points to the evidence it presented regarding the relationship between Broadcom and the D-Link defendants, which included communications with one of the D-Link defendants regarding the district court litigation, an amicus brief filed by Broadcom in the appeal of that case, and Broadcom's use of the report of one of the plaintiff's experts from the district court litigation. In Wi-Fi's view, that evidence indicates that Broadcom and the D-Link defendants were "closely coordinating their opposition to the '215 patent," which should have been sufficient for the Board to order disclosure of the indemnity agreements and other requested discovery.

The Board began its analysis of the discovery issue by asking whether there existed more than a "mere possibil-

ity” or “mere allegation that something useful [to the proceeding] will be found.” It then engaged in a detailed analysis of the issue of privity as applied in the context of section 315(b), from which it concluded that “[t]o show privity requires a showing that Broadcom would be bound to the outcome of the Texas Litigation,” and that “[t]o be bound, in normal situations, Broadcom must have had control over the Texas Litigation.” Under that standard, the Board concluded that “[p]aying for trial expenses pursuant to indemnity normally does not establish privity or control,” and that Wi-Fi’s “evidence and arguments fail to show that the sought-after discovery would have more than a mere possibility of producing useful privity information.”

As noted, that legal standard is consistent with general legal principles, as explained in the PTO’s Office Patent Trial Practice Guide, 77 Fed. Reg. at 48759-60. Given that the Board explored the discovery issue in detail and applied the proper legal test for finding privity or real party in interest status under section 315(b), we decline to hold that the Board abused its discretion when it concluded that additional discovery was not warranted in this case.

C

Finally, Wi-Fi argues that the Board failed to provide an adequate explanation for its ruling on the section 315(b) issue and that its decision on that issue was not supported by substantial evidence. We disagree with both propositions.

In its Final Written Decision, the Board ruled that Wi-Fi had not shown that Broadcom was in privity with the D-Link defendants or that any of the D-Link defendants was a real party in interest in the inter partes review proceeding. In so ruling, the Board explained that Wi-Fi’s arguments were no different from the arguments Wi-Fi had made in its motion for additional discovery several

months earlier, and that “[t]he argument and evidence are unpersuasive for [the] same reasons explained in our Decision on Patent Owner’s Motion for Additional Discovery (Paper 23), which we adopt and incorporate by reference.” As described above, that earlier decision dealt at length with the section 315(b) issue, as did the Board’s decision in response to Wi-Fi’s request for reconsideration of that order. In its subsequent decision in response to Wi-Fi’s request for rehearing of the Final Written Decision, the Board further addressed the section 315(b) issue, again writing on that issue at some length. In light of its multiple and detailed discussions of the section 315(b) issue, the Board cannot fairly be accused of not providing an adequate explanation for its decision on that question.

We further hold that the Board’s decision was supported by substantial evidence. There was essentially no evidence before the Board that any of the D-Link defendants was a real party in interest in the inter partes review proceeding. While Wi-Fi has speculated that Broadcom may have been serving the interests of the D-Link defendants when it sought inter partes review, Broadcom clearly has an interest of its own in challenging the ’215 patent, based on its manufacture of the assertedly infringing chips. Other than Wi-Fi’s conjecture, there is no evidentiary support for Wi-Fi’s theory that Broadcom was acting at the behest or on behalf of the D-Link defendants.

On the issue of privity, the Board reasonably concluded that the evidence failed to show that Broadcom had sufficient control over the district court litigation to justify treating Broadcom as a virtual party to that proceeding. In applying the privity requirement of section 315(b), the Board has stated that the inquiry typically requires proof that the party in question had sufficient control over the prior proceeding that it could be bound by the results of that proceeding. *See Aruze Gaming Macau, Ltd. v. MGT Gaming, Inc.*, No. IPR2014-01288, 2015 WL

780607, at *4-8 (PTAB Feb. 20, 2015) (discussing the six *Taylor* factors and emphasizing the “flexible and equitable considerations” involved); *BAE Sys. Info. & Elec. Sys. Integration, Inc. v. Cheetah Omni, LLC*, No. IPR2013-00175, 2013 WL 5653116, at *2 (PTAB July 23, 2013) (holding that parties are not privies based only on a customer-seller relationship); *Apple Inc.*, 2013 WL 6514049, at *2-4 (holding that an indemnification provision is not indicative of privity or real-party-in-interest status).

There was no such showing of control in this case. Wi-Fi’s evidence showed that Broadcom’s interests as to the issue of infringement were generally aligned with those of its customers, and that Broadcom had indemnity agreements with at least two of the D-Link defendants. But the evidence did not show that Broadcom had the right to control that litigation or otherwise participated in that litigation to the extent that it should be bound by the results. Nor did any evidence suggest that the D-Link defendants were the real parties in interest in Broadcom’s inter partes review petition.⁴ Section 315(b) thus does not bar Broadcom from petitioning for inter partes review of the ’215 patent. Based on the full record before the Board, we conclude that substantial evidence supports the Board’s decision on the “real party in interest, or privy” issue.

⁴ Before the Board, Broadcom introduced evidence that it did not control the district court litigation or decisions made in that litigation. Although the document presenting that evidence was designated as confidential, the evidence was properly before the Board for its consideration and is available to us on appeal.

III

Wi-Fi also challenges the Board's determination that Seo anticipates the '215 patent. Wi-Fi makes three separate arguments: (1) that Seo does not disclose a "type identifier field"; (2) that Seo does not disclose a type identifier field within a message field; and (3) that the Board misconstrued the term "type identifier field."

A

Claim 1 of the '215 patent, which is representative, provides as follows:

A method for minimizing feedback responses in an ARQ protocol, comprising the steps of:

 sending a plurality of first data units over a communication link;

 receiving said plurality of first data units; and

 responsive to the receiving step, constructing a message field for a second data unit, said message field including a type identifier field and at least one of a sequence number field, a length field, and a content field.

Wi-Fi argues that Seo does not disclose a type identifier field because it discloses only a single type of message, and the single type of message contains fields for encoding errors as both lists and bitmaps. Wi-Fi relies on Figure 4 of Seo, shown below:

FIELD	LENGTH (BITS)
SEQ	8
CTL	4
RE_NUM	2
NAK_TYPE	2
NAK_SEQ	4
L_SEQ_HI	4
FIRST	12
LAST	12
FCS	16
PADDING	VARIABLE
NAK_Map_Count	2
NAK_Map	
NAK_Map_SEQ	12
NAK_Map	8

Based on Figure 4, Wi-Fi argues that the data structure in Seo contains fields for the list type of coding, which are entitled FIRST, LAST, FCS, and PADDING, and fields for the bitmap type of coding, which are entitled NAK_Map_Count, NAK_Map_SEQ, and NAK_Map.

Wi-Fi argues that in Seo all fields are always present, either as useful values or as “padded zeros,” i.e., placeholders, regardless of the value of the NAK_TYPE field. Therefore, Wi-Fi argues, the NAK_TYPE field does not function as a type identifier field that identifies the type of coding used in Seo’s data structure.

The Board rejected that argument, relying on the disclosure in Seo that certain fields “exist” depending on the value of the NAK_TYPE field. *See* Seo, col. 5, ll. 54-57 (“When a value of the field NAK_TYPE is ‘00’, the receiving station requests a retransmission of missed user data frames numbered a field FIRST through a field LAST.”); col. 6, ll. 18-22 (“If a value of the field NAK_TYPE is ‘01’, the field NAK_MAP_COUNT exi[s]ts.”). Based on those portions of the Seo specification, the Board concluded that Seo discloses a control frame “that includes certain fields only when NAK_TYPE is ‘00’ and includes other fields only when NAK_TYPE is ‘01.’” Accordingly, the Board rejected Wi-Fi’s argument that NAK_TYPE is not a type identifier field.

The Board also credited the testimony of Broadcom’s expert that it would not make sense to include unnecessary fields in a message. It was entirely reasonable for the Board to read the term “exist” in Seo in that way. Substantial evidence therefore supports the Board’s conclusion that Seo discloses the type identifier field feature recited in the ’215 patent.

B

Wi-Fi also argues that even if Seo discloses a type identifier field, Seo does not anticipate the ’215 patent, because the NAK_TYPE field in Seo is part of the S-PDU header rather than the message field, as required by the claims.

The Board rejected that argument, finding that the ’215 patent does not require the type identifier field to be in any particular part of the message, and that, in any event, Seo’s NAK_TYPE field was included in the message field. We agree with the Board. Nothing in the ’215 patent specifies whether the type identifier field must be located in the header or any other specific part of the message.

Wi-Fi also argues that a prior amendment to claim 1 shows that the claim is drawn to the distinction between the message body and the header. During the prosecution of the '215 patent, Wi-Fi offered the following amendment:

said message field including a type identifier field and at least one of ~~a type identifier field~~, a sequence number field, a length field, and a content field.

That amendment moved the type identifier field from being one of four optional fields to being a required field, accompanied by at least one of the three remaining optional fields.

On appeal, Wi-Fi argues that the amendment “distinguish[es], among other things, fields that were included in the header of the PDU such as the ‘PDU_format’ field shown in the admitted prior art.” That argument is meritless. The type identifier field was identified as part of the message field before and after the amendment, so the amendment had no effect on where in the packet the type identifier field had to be located. The amendment simply made that term a required feature, rather than one of the options listed in the “at least one” clause.

That understanding is confirmed by the applicants’ remarks accompanying the amendment. The applicants distinguished a prior art reference by stating that amended claim 1 “provides the type identifier field and at least one of a sequence number field, a length field, and a content field.” Because there is no support in the patent or the prosecution history for Wi-Fi’s distinction between the presence of the type identifier field in the message field and in the header, the Board was correct to reject Wi-Fi’s argument.

C

Wi-Fi next argues that the Board erred in construing the term “type identifier field” in the phrase “responsive to the receiving step, constructing a message field for a second data unit, said message field including a type identifier field” to mean “a field of a message that identifies the type of that message.” Wi-Fi argues that the Board’s construction failed to specify that a type identifier field must distinguish the type of message from a number of different message types.

We agree with the Board that Wi-Fi’s interpretation does no more than restate what is already clear from the Board’s construction—that a type identifier field must distinguish between different message types. Wi-Fi’s real quarrel is not with the Board’s claim construction, but with the Board’s conclusion that Seo discloses different message types. As we have noted, the Board’s conclusion that Seo discloses different message types is supported by substantial evidence.

IV

Wi-Fi challenges the Board’s analysis of claim 15. That claim reads:

A method for minimizing feedback responses in an ARQ protocol, comprising the steps of:

 sending a plurality of first data units over a communication link;

 receiving said plurality of first data units; and

 responsive to the receiving step, constructing a message field for a second data unit, said message field including a type identifier field and at least one of, a length field, a plurality of erroneous sequence number-fields, and a plurality of erroneous sequence number length fields, each of said plurality of errone-

ous sequence number fields associated with a respective one of said plurality of erroneous sequence number length fields.

Wi-Fi argues that claim 15, properly construed, requires that the message field contain either a “length field” or an “erroneous sequence number length field.” Because Seo does not disclose length fields of either type, Wi-Fi argues that it does not anticipate claim 15.

Wi-Fi’s argument is based on the structure of the “at least one of” clause. That clause requires that at least one of the following be present: “a length field,” “a plurality of erroneous sequence number fields,” or “a plurality of erroneous sequence number length fields.” The second entry on the list, “a plurality of erroneous sequence-number fields,” is not by itself a type of length field. However, the final clause of that limitation provides “each of said plurality of erroneous sequence number fields associated with a respective one of said plurality of erroneous sequence number length fields.” That clause, Wi-Fi argues, requires that each erroneous sequence number field must be associated with an erroneous sequence number length field. For that reason, Wi-Fi contends that some sort of length field is required to meet claim 15.

Broadcom argues that the “each of said” clause requires that each of the erroneous sequence number length fields must be associated with an erroneous sequence number field, not the other way around. Therefore, in Broadcom’s view, an erroneous sequence number field can stand alone, without an accompanying erroneous sequence number length field; for that reason, according to Broadcom, claim 15 does not require the presence of a length field in all cases.

Wi-Fi’s is the better reading of the text of the claim. The structure of the “at least one of” limitation is best understood by stripping it to its essence: substituting A for the length field, B for the plurality of erroneous se-

quence number fields, and C for the erroneous sequence number length fields. So viewed, the claim by its terms would require one of A, B, or C, except that each of B must be associated with one of C. That reading is at odds with Broadcom's, which would require each of C to be associated with one of B.

While the text of the limitation, standing alone, favors Wi-Fi's interpretation, we conclude that Wi-Fi's interpretation does not make sense in light of the specification, and thus that Broadcom's interpretation must be accepted as correct.

The specification of the '215 patent explains the properties and purpose of the length field. The length field is used in open-ended data structures to provide information about the data structure, such as the number of lists or bitmaps that are present in a packet, or the length of the bitmaps that are used to represent errors. *See* '215 patent, col. 2, ll. 56-62; col. 6, ll. 25-34; col. 7, ll. 52-65. Because the length of a particular message can be fixed by the rules of the protocol, a length field is not a required feature of the invention. *See id.*, col. 7, ll. 57-60 ("For this exemplary embodiment, each such message includes a type identifier, and the length is either fixed or indicated by a length field for each specific message.").

The specification also describes the purpose of the erroneous sequence number fields and the erroneous sequence number length fields. The specification explains that one method for representing errors "is to include a field after each list element which determines the length of the error, instead of indicating the length of the error with an 'ending' [sequence number]." *Id.*, col. 7, ll. 31-33. Using that method, strings of consecutive errors are represented with an erroneous sequence number that marks the beginning of the error, followed by an erroneous sequence number length field that marks how long the error persists. That method is generally more effi-

cient than representing an error sequence by its starting and ending point because “[i]n most systems, the size of the length field would then be substantially smaller than the size of the [sequence number] field.” *Id.*, col. 7, ll. 33-35.

Figure 9 of the '215 patent shows how that method would represent the failed transmission of a series of packets numbered 51-77:

Field	Field Value		Field size
	Decimal	Bits	
LIST'	N/A ¹	01	2
LENGTH	1	00001	5
SN ₁	51	000000110011	12
L ₁	27	11011	5
ACK	N/A	11	2
SN	101	000001100101	12

The erroneous sequence number field, SN₁, shows that the error sequence begins at sequence number 51. The erroneous sequence number length field, L₁, shows that the error extends for 27 packets, covering packets 51 through 77.

Based on those descriptions of embodiments of the invention, it is clear that an erroneous sequence number length field is useful only when it is paired with an erroneous sequence number field, while an erroneous sequence number field can be useful without an accompanying erroneous sequence number length field. Thus, an erroneous sequence number field can stand alone, but an erroneous sequence number length field cannot.

The '215 specification makes clear that an erroneous sequence number field can be used absent an erroneous

sequence number length field. As examples, Figure 10 shows four erroneous sequence numbers that are used to indicate errors, and Figure 12 shows a bitmap that contains an erroneous sequence number field to indicate where the bitmap begins. Both contain erroneous sequence number fields, but not erroneous sequence number length fields, thus supporting the Board's construction of claim 15.

By contrast, an erroneous sequence number length field can indicate an error only by reference to a starting point, which would be represented by an erroneous sequence number field. The '215 patent discloses no examples of an erroneous sequence number length field without an accompanying erroneous sequence number field, for the simple reason that an erroneous sequence number length field standing alone would not convey sufficient information to determine what packets must be retransmitted.

Based on the full teaching of the specification, we conclude that Wi-Fi's proposed construction of claim 15 is unreasonable. It would allow an erroneous sequence number length field to be present without an erroneous sequence number field, which the specification indicates would not work, while requiring all erroneous sequence number fields to be associated with erroneous sequence number length fields, which the patent teaches is not necessary. The Board's construction, on the other hand, comports with what the patent teaches about the number and length fields. Even though the language of claim 15, standing alone, provides some support for Wi-Fi's interpretation, we hold that in the end the claim must be read as the Board construed it in order to be faithful to the invention disclosed in the specification.

Accordingly, claim 15, as properly construed, does not require either a length field or a plurality of erroneous sequence number length fields. Because Wi-Fi contends

that Seo is distinguishable solely on the ground that it does not require length fields of any type, we hold that the Board was correct to conclude that Seo anticipates claim 15 of the '215 patent.

Each party shall bear its own costs for this appeal.

AFFIRMED

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

WI-FI ONE, LLC,
Appellant

v.

BROADCOM CORPORATION,
Appellee

**ANDREI IANCU, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,**
Intervenor

2015-1944

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2013-00601.

REYNA, *Circuit Judge*, dissenting.

In this appeal, the court for the first time defines the legal standard for establishing “privity” under 35 U.S.C. § 315(b). The majority concludes that to establish privity, a petitioner must have had control over the prior district court litigation. This narrow standard will make it difficult for a patentee to successfully assert § 315(b). I be-

lieve that control of a prior litigation is but one form of privity. Privity may exist in other forms that do not involve control over the prior litigation, all of which are excluded under the standard adopted by the majority. I respectfully dissent.

This court recently ruled *en banc* that § 315(b) time bar determinations by the Patent Trial and Appeal Board (“Board”) in *inter partes* review (“IPR”) proceedings are appealable. *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1375 (Fed. Cir. 2018) (*en banc*). Following that ruling, the court remanded these three consolidated cases to this panel to consider the merits of Wi-Fi One, LLC’s (“Wi-Fi”) appeal of whether Broadcom Corporation’s (“Broadcom”) petition is time barred, and whether Wi-Fi is entitled to additional discovery on the § 315(b) issue.

The majority affirms the Board’s decision that Broadcom’s petition is not time barred under § 315(b). The majority rejects Wi-Fi’s argument that the Board applied a legally erroneous standard in its privity analysis. The majority affirms the Board’s decision that the applicable legal standard is whether “the party in question had sufficient control over the prior proceeding.” Maj. Op. at 17. The majority also concludes that the Board did not abuse its discretion in denying Wi-Fi’s request for additional discovery. Maj. Op. at 16.

I depart from the opinion of my colleagues. I conclude that the Board applied an erroneous standard for establishing privity, which in turn drove its decision to deny further discovery. The Board’s denial of Wi-Fi’s motion for additional discovery was therefore an abuse of discretion. I would vacate the Board’s final written decision with instruction that the Board permit limited, focused discovery on the § 315(b) privity issue and thereafter determine anew whether Broadcom’s petition is time barred in accordance with the correct standard.

I. PRIVITY

In 2010, Wi-Fi's predecessors-in-interest, Ericsson, Inc. and Telefonaktiebolaget LM Ericsson (collectively "Ericsson"), filed its complaint for infringement of U.S. Patent Nos. 6,772,215 ("215 patent"), 6,466,568 ("568 patent"), and 6,424,625 ("625 patent") in the United States District Court for the Eastern District of Texas against multiple defendants ("the Texas Litigation"). See *Ericsson Inc. v. D-Link Sys., Inc.*, No. 6:10-CV-473, 2013 WL 4046225, at *24 n.1 (E.D. Tex. Aug. 6, 2013), *aff'd in part, vacated in part, rev'd in part*, 773 F.3d 1201 (Fed. Cir. 2014). The case progressed to a jury trial, where the jury found that the defendants infringed the asserted claims. Broadcom, the appellee here, was not a named defendant in the Texas Litigation. In 2013, three years after the defendants in the Texas Litigation were served with complaints for infringement, Broadcom filed three separate petitions for IPR of the three patents.

During the pre-institution phase, Wi-Fi sought to bar institution of Broadcom's IPRs. Wi-Fi argued that Broadcom "is subject to the 35 U.S.C. § 315(b) bar as a privity to" the defendants of the Texas Litigation initiated three years before the filing of Broadcom's petitions. J.A. 144. Wi-Fi argued that privity could exist on multiple independent grounds: substantive legal relationship between Broadcom and the Texas Litigation defendants, Broadcom's control over the Texas Litigation, and the defendants' collusion in filing of the IPR petitions. J.A. 46, 49–50. However, the Board limited its privity analysis to a single ground. The Board repeatedly stated that in order to find privity, Wi-Fi had to show that Broadcom had control over the Texas Litigation. "To be bound [to the outcome of the Texas Litigation], in normal situations, Broadcom *must have had control over the Texas Litiga-*

tion.” *Broadcom Corp. v. Wi-Fi One, LLC*, No. IPR2013-00601, Paper No. 23, at 7 (P.T.A.B. Mar. 6, 2015) (emphasis added); J.A. 81.¹ Applying this standard, the Board rejected Wi-Fi’s motion for additional discovery because Wi-Fi’s evidence and arguments failed to show that “Broadcom controlled or could have controlled the Texas Litigation.” J.A. 89.

Wi-Fi appeals and argues that “[t]he Board committed a critical and serious legal error” in making its § 315(b) determination by “appl[ying] a narrow and rigid legal standard that focused exclusively on whether Broadcom has a right to control the District Court Litigation.” Appellant Br. at 31, 34. Wi-Fi argues that “[t]he Board’s erroneous legal standard undermines both the plain text and purpose of § 315(b).” *Id.* at 35. The majority avoids Wi-Fi’s precise argument on appeal, endorses the Board’s narrow standard for proving privity under § 315(b), and affirms the Board’s finding of no privity between Broadcom and the Texas Litigation defendants because “[t]here

¹ See also J.A. 85 (“The totality of the evidence fails to amount to more than a ‘mere possibility’ that Broadcom controlled, or could have controlled, the Texas litigation.”) (emphasis added); J.A. 87 (“[T]he IPR filings fail to show control over the Texas Litigation. The evidence does not amount to more than speculation that any of Broadcom’s activity constitutes evidence of collusion with the D-Link defendants in the Texas Litigation in a manner that would bind Broadcom to the outcome thereof.”) (emphasis added); J.A. 89 (“The evidence and arguments fail to show that the sought-after discovery would have more than a mere possibility of producing useful privity information, *i.e.*, that Broadcom controlled or could have controlled the Texas Litigation.”) (emphasis added).

was no such showing of control in this case.” Maj. Op. at 18.

I disagree. The Board’s narrow and rigid “control over the prior litigation” requirement contravenes precedent from the Supreme Court and this court, impermissibly cabins the privity inquiry into only one factor—control of the prior litigation—and ignores other relevant factors. It fails to account for the complexities of the marketplace and the infinite number of business forms and relationships that entities assume to achieve common purpose.

The term “privity” is not defined in the Leahy-Smith America Invents Act (“AIA”). I agree with the majority that Congress intended to adopt common law principles of “privity” and “real party in interest” when it drafted the AIA. Maj. Op. at 8 (citing 154 Cong. Rec. S9987 (daily ed. Sept. 27, 2008) (statement of Sen. Kyl)). Congress did not leave to the U.S. Patent and Trademark Office’s (“PTO”) discretion to determine the legal standards for “privity”; it is a question well within the province of the judiciary. See *U.S. Bank Nat’l Ass’n ex rel. CWC Capital Asset Mgmt. LLC v. Vill. at Lakeridge, LLC*, 138 S. Ct. 960, 967 (2018) (finding appellate courts should apply *de novo* review when “elaborating on a broad legal standard” because of “‘institutional advantages’ in giving legal guidance” (quoting *Salve Regina College v. Russell*, 499 U.S. 225, 231–33 (1991))); *Princeton Vanguard, LLC v. Frito-Lay N. Am., Inc.*, 786 F.3d 960, 964 (Fed. Cir. 2015) (“Whether the Board applied the correct legal standard . . . is a question of law we review *de novo*.”); *McDonnell Douglas Corp. v. United States*, 323 F.3d 1006, 1014 (Fed. Cir. 2003) (holding that “determination of legal standards is a pure issue of law” that we review *de novo*).

The general definition of privity is “[t]he connection or relationship between two parties, each having a legally recognized interest in the same subject matter (such as a transaction, proceeding, or piece of property).” *Privity*,

Black's Law Dictionary (10th ed. 2014). Generally, one is not bound by a judgment "in a litigation in which he is not designated as a party or to which he has not been made a party by service of process." *Hansberry v. Lee*, 311 U.S. 32, 40 (1940). However, this rule is subject to important exceptions where the judgment would preclude a nonparty from relitigating the same claims and issues in another forum. See *Taylor v. Sturgell*, 553 U.S. 880, 893 (2008). The term "privity" is used broadly "as a way to express the conclusion that nonparty preclusion is appropriate on any ground." *Id.* at 894 n.8; *Richards v. Jefferson Cty., Ala.*, 517 U.S. 793, 798 (1996) (same); *Int'l Nutrition Co. v. Horphag Research, Ltd.*, 220 F.3d 1325, 1329 (Fed. Cir. 2000) (stating that the term privity "is simply a shorthand way of saying that [a] nonparty [*i.e.*, a party not named in a prior action] will be bound by the judgment in that action").

In a unanimous opinion, the Supreme Court in *Taylor* described a non-exhaustive list of six categories where each alone is sufficient to establish privity between a named party and a nonparty in litigation: (1) an agreement between the parties to be bound; (2) pre-existing substantive legal relationships between the parties; (3) adequate representation by the named party; (4) the nonparty's control of the prior litigation; (5) where the nonparty acts as a proxy for the named party to relitigate the same issues; and (6) where special statutory schemes foreclose successive litigation by the nonparty (*e.g.*, bankruptcy and probate). 553 U.S. at 894–95. The Supreme Court noted that this list of six categories "is meant only to provide a framework" for considering privity, "not to establish a definitive taxonomy." *Id.* at 893 n.6.

The PTO's Trial Practice Guide is consistent with *Taylor*. Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756 (Aug. 14, 2012). The Trial Practice Guide provides that the PTO "intends to evaluate what parties constitute 'privies' in a manner consistent with the flexible and

equitable considerations established under federal caselaw.” *Id.* at 48,759. The Trial Practice Guide adopts *Taylor*’s definition for privity: “[p]rivity is essentially a shorthand statement that collateral estoppel is to be applied in a given case The concept refers to a relationship between the party to be estopped and the unsuccessful party in the prior litigation which is sufficiently close so as to justify application of the doctrine of collateral estoppel.” *Id.* (citations omitted); see *Taylor*, 553 U.S. at 894 n.8 (“The term ‘privity,’ however, has also come to be used more broadly, as a way to express the conclusion that nonparty preclusion is appropriate on any ground.”).

Based on the record before the Board, at minimum three of the six *Taylor* grounds—the second, fourth and fifth—are implicated in this case. First, privity can be found when there is a substantive legal relationship between the parties. *Taylor*, 553 U.S. at 894. For example, as this court has observed, nonparty preclusion is warranted when an indemnitor participates in defending an action brought against its indemnitee. *Intel Corp. v. U.S. Int’l Trade Comm’n*, 946 F.2d 821, 839 (Fed. Cir. 1991) (finding that “an indemnification agreement, in other cases, has alone been enough to find privity”); see also *SpeedTrack, Inc. v. Office Depot, Inc.*, No. C 07–3602 PJH, 2014 WL 1813292, at *6–7 (N.D. Cal. May 6, 2014) (ruling that in view of the indemnification obligations the manufacturer owed to its customer, the manufacturer was in privity with the customer such that claim preclusion could apply), *aff’d*, 791 F.3d 1317, 1324–29 (Fed. Cir. 2015). In cases involving indemnification agreements, the indemnitor operates like an insurer who indemnifies the insured—the indemnitee—and when the indemnitor has paid the entire claim to the indemnitee, he is subrogated to the rights of the indemnitee and becomes the real party in interest. See 18A Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, Federal Practice and Proce-

dure § 1546 (2d ed. 2011) (hereinafter “Wright & Miller”). In this regard, the indemnitor stands in the shoes of the indemnitee. Thus, I disagree with the majority’s endorsement of the Board’s finding that an indemnification provision cannot be indicative of privity or real-party-in-interest status. Maj. Op. at 15–16. Indemnification agreements alone may not always mandate a finding of nonparty preclusion, but their existence is strong evidence for privity and, at minimum, presents an independent basis that warrants additional discovery into the terms of these agreements and the parties’ actions pursuant to the agreements.

Wi-Fi discovered that Broadcom had indemnification agreements pertaining to the infringing products with some Texas Litigation defendants during IPR. Indeed, Broadcom supplied the Texas Litigation defendants the very chipsets that formed the basis for the infringement allegations in the Texas Litigation. Broadcom does not deny the existence of the indemnification agreements, nor contest whether they pertained to the accused products. Rather, Broadcom reported in its SEC filings that it is not uncommon for Broadcom to be “required to indemnify some customers and strategic partners under our agreements if a third party alleges or if a court finds that our products or activities have infringed upon, misappropriated or misused another party’s proprietary rights.” J.A. 190–91. The Board acknowledged that the district court in the Texas Litigation mentioned “two indemnity agreements and an e-mail communication about indemnity.” J.A. 84. Wi-Fi also alleges that Broadcom assisted defendants during the Texas Litigation, and provided analysis of the “very patents that are now the subject of Broadcom’s [IPR] petitions.” J.A. 45–46.

Citing *Taylor*, Wi-Fi argued that indemnity agreements constitute a substantive legal relationship sufficient under the second category of *Taylor* to establish privity in its motion for additional discovery. Wi-Fi

proffered concrete evidence of a substantive legal relationship between Broadcom and the prior defendants, and its position cannot be said to be mere “speculation” or “conjecture.” J.A. 90. The evidence suggests that the relationship between Broadcom and the Texas Litigation defendants went beyond typical transactions between supplier and buyer. Based on this evidence, Wi-Fi sought limited additional discovery on the terms of the indemnification agreements, but was rejected by the Board. This denial was in error. The terms of indemnity agreements between Broadcom and the Texas Litigation defendants are important to determine the relationship between Broadcom and the Texas Litigation defendants. Depending on the agreements’ terms and whether Broadcom has paid claims to the defendants pursuant to the court’s judgment in the Texas Litigation, the indemnification agreements would create a substantive legal relationship between Broadcom and the Texas Litigation defendants, potentially barring the PTO under § 315(b) from instituting Broadcom’s IPRs. See *Intel*, 946 F.2d at 839; *Speed-Track*, 2014 WL 1813292, at *6–7.

Second, privity can also be found when a nonparty “assume[d] control” over the litigation in which that judgment was rendered. *Taylor*, 553 U.S. at 895 (citing *Montana v. United States*, 440 U.S. 147, 154 (1979)). The rationale for this ground of nonparty preclusion is that since the nonparty has had “the opportunity to present proofs and argument,” he has already “had his day in court” even though he was not a named party to the litigation. *Id.* (quoting Restatement (Second) of Judgments § 39 cmt. a). To determine whether privity exists between parties, “all contacts between [the parties], direct and indirect, must be considered.” *Intel*, 946 F.2d at 838. Although whether the nonparty exercised or could have exercised control over a party’s participation in a proceeding is a “common consideration” for a privity inquiry, the PTO’s Trial Practice Guide explicitly states that “[c]ourts

and commentators agree, however, that there is *no 'bright-line test'* for determining the *necessary quantity or degree of participation* to qualify as a 'real party-in-interest' or 'privy' based on the control concept." 77 Fed. Reg. at 48,759 (emphases added).

The evidence before the Board shows that Broadcom was more than a bystander to the Texas Litigation. Broadcom has a corporate policy on litigation on behalf of its customers, including an undisputed contractual obligation to indemnify the Texas Litigation defendants. J.A. 84. Broadcom's SEC filings report that to protect interests of its indemnified "customers and strategic partners," Broadcom "engage[s] in litigation to . . . determine the validity and scope of the proprietary rights of others, including [its] customers." J.A. 45. Wi-Fi also proffered evidence that Broadcom coordinated with the defendants in the Texas Litigation, which may have assisted Broadcom in the filing of the IPRs. J.A. 45–47, 50. In addition, Broadcom filed an amicus brief in the appeal from the Texas Litigation supporting the defendants. While the Texas Litigation was pending, Broadcom argued in another forum that the assertion of Wi-Fi's patents was anticompetitive, demonstrating that Broadcom had direct business interests implicated in the Wi-Fi patents asserted in the Texas Litigation. Thus, while the evidence so far may not be sufficient to establish the extent of control that Broadcom had in the Texas Litigation, the evidence is sufficient to warrant additional discovery concerning Broadcom's control over the Texas Litigation defendants. In my view, discovery is required for the Board to properly assess the degree of Broadcom's involvement in the Texas Litigation. *See Intel*, 946 F.2d at 838.

Finally, a party bound by a judgment cannot escape preclusion by relitigating the same issues through a nonparty proxy. *Taylor*, 553 U.S. at 895 (recognizing that a nonparty cannot "later bring[] suit as the designated representative of a person who was a party to the prior

adjudication”). This concept is similar to real party in interest. The typical common law expression of real party in interest indicates a party “who, according to the governing substantive law, is entitled to enforce the right.” See Wright & Miller § 1543 (discussing Fed. R. Civ. P. 17). This notion reflects standing concepts that do not fit directly in the America Invents Act trial context because there is no standing requirement for a petitioner to file an IPR. The PTO interprets real party in interest as “the party that desires review of the patent” and “may be the petitioner itself, and/or it may be the party or parties at whose behest the petition has been filed.” 77 Fed. Reg. at 48,759.

Wi-Fi contends that the Texas Litigation defendants are the real parties in interest in Broadcom’s IPRs. In support, Wi-Fi alleges evidence that suggested collusion between the defendants and Broadcom in the filing of the petitions. For example, Broadcom’s petitions relied on Ericsson’s (Wi-Fi’s predecessor-in-interest) expert report from the Texas Litigation—a report that Broadcom allegedly could only have obtained from one of the defendants. Broadcom’s IPR petitions also recited the same prior art references used by the defendants in the Texas Litigation, as the Board acknowledged, again suggesting collusion between Broadcom and the defendants. Before the Board, Wi-Fi sought discovery of communications between Broadcom and the defendants relating to the filing of the IPRs. Under the facts of this case, and in view of *Taylor*, Wi-Fi provided the Board with sufficient evidence to support its privity allegations and the Board abused its discretion by denying Wi-Fi’s request for discovery.

In face of a fact pattern that calls into question multiple *Taylor* categories—substantive legal relationships, control of the prior litigation, and relitigating by proxy—the Board applied a “control over the prior litigation” test for privity that is impermissibly narrow. The Board concluded that “[t]o be bound [to the outcome of the Texas

Litigation], in normal situations, Broadcom *must have had control over the Texas Litigation.*” J.A. 81 (emphasis added). The Board’s narrow application is inconsistent with *Taylor* and the PTO’s Trial Practice Guide. By concluding “[p]aying for trial expenses pursuant to indemnity normally does not establish privity or control,” the Board failed to recognize that substantive legal relationship under *Taylor* is a separate ground for privity from control over prior litigation, and is not merely a circumstance to establish the latter. J.A. 85. The Board cited a few cases from other circuits and district courts to support its proposition, J.A. 81–83, but these cases predated *Taylor* and do not stand for the proposition that privity can only be satisfied if the petitioner controls the district court litigation. At most, these cases demonstrate that when a party has had control over a prior litigation, privity can be found, an outcome that is consistent with *Taylor*’s fourth category.

Privity, therefore, can exist in situations where a party has not had direct control over a prior litigation, as outlined by *Taylor* and acknowledged by the PTO. 77 Fed. Reg. at 48,759 (“There are *multiple factors* relevant to the question of whether a non-party may be recognized as a ‘real party-in-interest’ or ‘privy.’” (emphasis added)). Hence, the majority reaches the incorrect conclusion that the Board’s legal standard for privity analysis “is consistent with general legal principles.”² Maj. Op. at 9.

² The majority justifies its narrow holding on grounds that Wi-Fi did not raise other *Taylor* grounds before the Board and that Wi-Fi limited its argument to the “control over the prior litigation” ground. Maj. Op. at 12 n.3. This is incorrect. In its motion for additional discovery, Wi-Fi argued that *Taylor* is the legal standard and it sets out the six categories for determining whether

In deciding whether privity exists under § 315(b), the Board should start with a review of the six grounds of privity set forth in *Taylor* and consider all the facts and circumstances for each ground. Among the factors that the Board should consider are: (1) whether there exists a substantive legal relationship between the parties and the nature of that relationship; (2) whether the petitioner and

a nonparty to a suit is bound by a prior judgment. J.A. 49. Wi-Fi explicitly argued that privity could found on multiple grounds: substantive legal relationships based on indemnification agreements, Broadcom's control over the Texas Litigation, and the defendants' collusion in filing of the IPR petitions. J.A. 46, 49–50. For example, Wi-Fi argued that “[o]ne [*Taylor*] category asks whether the nonparty maintains a ‘substantive legal relationship’ with a party in suit” and that “[t]he weight of authority strongly supports that an indemnity agreement constitutes a substantive legal relationship sufficient to establish privity.” J.A. 49, 50. Wi-Fi repeats the allegation that the Board applied an erroneous legal standard in the instant appeal. See Appellant Br. at 31. It is well-established that a litigant has a “right to have all issues fully considered and ruled on by the appellate court.” *Bernklau v. Principi*, 291 F.3d 795, 801 (Fed. Cir. 2002) (citing *United States v. Garza*, 165 F.3d 312, 314 (5th Cir. 1999)). Although this does not equate to a right to a full written opinion on every issue raised, this court should not avoid addressing the *very* question on appeal: what is the legal standard for establishing that a petition is time barred under § 315(b)? This is particularly true where, as here, we review for the first time the legal standard for privity under § 315(b), a question that naturally rises from our *en banc* decision holding that this court has jurisdiction to review § 315(b) determinations. *Wi-Fi One*, 878 F.3d at 1375.

an accused infringer in a prior litigation have worked in concert in that litigation; and (3) whether the petitioner and the accused infringer in the prior litigation have worked in concert to file the IPR petition.³

Substantive legal relationships may take a variety of forms, including, but not limited to, subsidiary and parent company, joint venture, preceding and succeeding owners of property, bailee and bailor, assignee and assignor, indemnitee and indemnitor, and subrogee and subrogor. *See Taylor*, 553 U.S. at 894. For example, the relationship between parties may extend beyond that of typical suppliers and buyers, such that the parties are stakeholders engaged in a common enterprise. In such instances, a substantive legal relationship may exist and privity may be established. Further, a petitioner's participation in the

³ The use of “prior litigation” does not imply that the prior district court action must be resolved or reach a judgment for the purpose of the time bar under § 315(b). Section 315(b) states that “[a]n inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner *is served with a complaint alleging infringement of the patent.*” 35 U.S.C. § 315(b) (emphasis added). Once a complaint of infringement is served, the petitioner, real party in interest, or privy of the petitioner has a statutory one year period to file an IPR from the date of service. Nothing in § 315(b) indicates that the outcome of the district court litigation affects the time bar determinations. The time bar applies regardless if the prior litigation is still ongoing at the end of the one year period, or if the parties settle before that date.

prior litigation can take a variety of forms, such as: whether the petitioner participated, directly or indirectly, in the prior litigation and the extent of the participation; whether the petitioner controlled, or had opportunity to control the prior litigation; and whether the petitioner provided funding for or was obliged to fund the prior litigation. Similarly, an accused district court litigation infringer's participation in the filing of the IPR petition via a nonparty proxy, such as whether the accused infringer participated, controlled, or funded the filing of the IPR petition, directly or indirectly, could lead to a finding that the petitioner is in privity with the accused infringer.

II. DISCOVERY

Relying on an erroneous standard of privity, the Board abused its discretion when it denied Wi-Fi's motion for additional discovery. The Board gave two reasons for denying Wi-Fi's motion for additional discovery. First, the Board cautioned that "without some evidence of actual control of a trial," the discovery could "spiral into what amounts to a separate trial that involves a myriad of considerations." J.A. 89. The Board also suggested that a restrictive standard for additional discovery is required, or anything less would "impact[] the PTAB's mandate to expedite the proceedings and provide limited discovery in the interests of justice." *Id.*

The Board's first ground fails because the record of this case amply supports granting Wi-Fi's motion for additional discovery. First, Wi-Fi's request amounts to more than a "mere possibility" or "mere allegation that something useful [to the proceeding] will be found." J.A. 80. Wi-Fi has asserted the existence of concrete evidence, which Broadcom does not dispute. Second, Wi-Fi's discovery request was limited in scope and focused only on the privity claims. And third, the requested discovery, if proven to be true, would likely establish privity between Broadcom and the Texas Litigation defendants.

The inquiry into privity is highly fact-dependent, and the Board should not be overly restrictive in granting discovery motions. *See Intel*, 946 F.2d at 838 (holding that “all contacts between [the parties], direct and indirect, must be considered”). As discussed above, each *Taylor* ground alone may be sufficient to establish privity and thus bar the institution of the IPR. Privity can also be inferred if circumstantial evidence supports collusion or a substantive legal relationship between the parties. This is particularly relevant because evidence of privity often involves confidential commercial agreements that are not publically available.⁴ Parties often take steps to conceal their relationship and in so doing hide the identity of the actual stakeholder(s). Additional discovery should only be denied when a patentee fails to concretely identify evidence implicating at least one *Taylor* factor, or when the allegation of privity, if taken as true, cannot establish a single *Taylor* factor.

Wi-Fi’s motion for additional discovery should be granted because the record shows that the relationship between Broadcom and the Texas Litigation defendants went beyond a typical supplier/buyer relationship; Wi-Fi alleged factual evidence to support its discovery request; and most of Wi-Fi’s requested evidence, such as the indemnification agreements (the existence of which is not disputed by Broadcom) are easy to produce and cannot be otherwise obtained. When viewed in aggregate, Wi-Fi’s showing established a strong basis for allowing discovery.⁵

⁴ Broadcom and the Texas Litigation defendants refused to waive confidentiality with regard to the indemnification agreements before the Board. J.A. 51.

⁵ Wi-Fi sought to discover contracts between the parties, especially the terms of the indemnification

The Board's expediency ground also fails. The Board notes that given the statutory deadlines for issuing final written decisions in IPRs, the Board "must be conservative in authorizing additional discovery." J.A. 80. However, the desire to expedite the proceedings cannot come at the cost of justice. *Sackett v. EPA*, 566 U.S. 120, 130 (2012) (repudiating "the principle that efficiency of regulation conquers all"). Importantly, a fundamental statutory purpose of § 315(b) is to "govern[] the relation of IPRs to other proceedings or actions, including actions taken in district court," and to "set[] limits on the [PTO] Director's statutory authority to institute, balancing various public interests." *Wi-Fi One*, 878 F.3d at 1374.

As a threshold issue prior to institution, time bar determinations are vital because IPRs can deprive a patentee of significant property rights though the cancellation of patents, as happened in this case. Although the statute imposes no standing requirement on who may file a petition, § 315(b) attests that the doors to IPR institution are not open to every would-be petitioner. As this court noted *en banc*, § 315(b) protects both the integrity and efficiency of the IPR process by giving the Director of the PTO an important tool to refuse institution. *Wi-Fi One*, 878 F.3d at 1374. The restrictive standard adopted by the majority dulls that tool and defeats the purpose of § 315(b). For these reasons, I respectfully dissent.

agreements, records of invoices and payments between them pursuant to the indemnification agreements, and communications relating solely to the Texas Litigation and the IPRs. The Board may limit the scope of additional discovery.