

NOTE: This disposition is nonprecedential.

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

ALTERWAN, INC.,
Plaintiff-Appellant

v.

**AMAZON.COM, INC., AMAZON WEB SERVICES,
INC.,**
Defendants-Appellees

2025-1285

Appeal from the United States District Court for the
District of Delaware in No. 1:19-cv-01544-MN, Judge
Maryellen Noreika.

Decided: September 11, 2026

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Monica, CA; TODD RICHARD GREGORIAN, San Francisco,
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Before LOURIE and PROST, *Circuit Judges*, and
SUBRAMANIAN, *District Judge*.¹

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

Dissenting opinion filed by *District Judge* SUBRAMANIAN.

PROST, *Circuit Judge*.

AlterWAN, Inc. (“AlterWAN”) appeals from the stipulated final judgment of noninfringement of the U.S. District Court for the District of Delaware favoring Amazon.com, Inc. and Amazon Web Services, Inc. (together, “Amazon”). AlterWAN challenges the district court’s claim-construction rulings, upon which the stipulated judgment rests, and the district court’s exclusion of AlterWAN’s damages expert. We affirm the district court’s claim constructions and thus do not reach the exclusion of AlterWAN’s expert.

BACKGROUND

U.S. Patent No. 8,595,478 (“the ’478 patent”) relates to implementing wide area networks with improved quality of service. ’478 patent col. 3 l. 61–col. 4 l. 9. We assume general familiarity with the patent’s subject matter, as we discussed it in our prior opinion. *AlterWAN, Inc. v. Amazon.com, Inc.*, 63 F.4th 18, 19–21 (Fed. Cir. 2023) (“*AlterWAN I*”).

At issue in this appeal are claims 18 and 51, both of which recite a “cooperating service provider.” The district court construed that term as “service provider that agrees to provide non-blocking bandwidth.” *Id.* at 21. Our prior

¹ Honorable Arun Subramanian, District Judge, United States District Court for the Southern District of New York, sitting by designation.

opinion mainly concerned the district court's derivative construction of the term "non-blocking bandwidth," which the district court had construed as "bandwidth that will always be available and will always be sufficient." *Id.* at 20. In that appeal, we vacated the parties' initial stipulation of noninfringement that was based on the district court's constructions. We also remanded the entire case with specific instructions for the district court to make appropriate revision to its construction of "non-blocking bandwidth" in light of the term effectively requiring the impossible. *Id.* at 23–24. We did not express a view on the correctness of the term "cooperating service provider" at that time. *Id.* at 22.

On remand, the district court applied this court's guidance and, upon receiving the parties' briefing and hearing testimony from their experts, reconstrued "non-blocking bandwidth" as "bandwidth that will always be available and will always be sufficient while the network is able to transmit data." *AlterWAN, Inc. v. Amazon.com, Inc.*, No. 1:19-cv-1544-MN, 2024 WL 4635380, at *1 (D. Del. Oct. 31, 2024) ("*Claim Construction Order*"). No party requested the district court to reconstrue "cooperating service provider," the term whose construction invokes "non-blocking bandwidth."

During the remand proceedings, the district court also ruled on the parties' motions to exclude certain expert testimony. As challenged here, the district court excluded aspects of the testimony of AlterWAN's damages expert.

Ultimately, the parties again stipulated to noninfringement, but for reasons different from before. Whereas the parties' first stipulation was ostensibly based only on Amazon's failure to provide service when the Internet goes down because of a catastrophic event, the parties' second stipulation is based on Amazon's failure to provide service even during mundane network failures. J.A. 9–10. The district court entered final judgment in favor of Amazon.

AlterWAN appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

AlterWAN makes two arguments on appeal. First, it challenges the district court’s construction of the terms “cooperating service provider” and “non-blocking bandwidth.” Second, it challenges the district court’s exclusion of its damages expert. Because we affirm on the former, we do not reach the latter.

I

Claim terms are generally construed based on their ordinary meaning to a person of skill in the art who has read the entire specification and all the claims. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). The specification may show that the patentee has provided a definition for a claim term, explicitly or implicitly. *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016). Additionally, the specification’s emphasis on a particular feature may inform a claim term’s meaning. *See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1318 (Fed. Cir. 2014). The prosecution history may shed further light on a claim term’s meaning because it can “provide[] evidence of how the [Patent Office] and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317. We review the district court’s claim construction based on intrinsic evidence de novo, and we review any underlying factual findings based on extrinsic evidence for clear error. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 333 (2015).

A

AlterWAN argues that the term “cooperating service provider” should be accorded its plain meaning as the amalgam of the commonly understood words “cooperating” and “service provider.” AlterWAN’s view is that a provider

need not provide “non-blocking bandwidth,” but can “cooperate” in other ways. The district court rejected AlterWAN’s approach and construed the term as “service provider that agrees to provide non-blocking bandwidth.” We see no error in the district court’s construction. The intrinsic record supports this construction for a few related reasons.

First, the term “cooperating service provider” does not appear in the specification and was only introduced in prosecution over a decade after the ’478 patent’s effective filing date. J.A. 746, 866–68. With the specification offering “no guidance” (or very little), we turn to the prosecution history. *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013); *see also Personalized Media Commc’ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1340 (Fed. Cir. 2020) (explaining that the prosecution history informs claim construction, even absent a clear and unmistakable disavowal). What the patentee considered unique, as revealed through its conduct in prosecution, was that prioritized traffic be routed to “cooperating service providers” that make a special provision of bandwidth. J.A. 747. For example, the patentee argued that the use of its claimed “cooperating service providers” was different from the prior art because its providers “prearranged for blocked bandwidth,” whereas the prior art routed traffic through any acceptable network path (without regard to provider).²

² The district court reasonably rejected AlterWAN’s argument that “blocked bandwidth,” which also does not appear in the specification, is somehow different from “non-blocking bandwidth,” recognizing that the “crux of the invention . . . is the use of cooperating service providers to provide priority routing . . . by providing *non-blocking bandwidth*.” J.A. 217 (emphasis added). We will likewise consider the patentee’s discussion of “blocked bandwidth”

Id. Further prosecution statements confirm that the routing of traffic “to a cooperating service provider,” which provides “blocked bandwidth,” is responsible for achieving prioritized routing. J.A. 867. Thus, the patentee considered its claimed “cooperating service provider(s)” to be different from just any service provider. The reason is that they provide “non-blocking bandwidth.”

Second, despite not using the term “cooperating service provider,” the specification makes clear that the essence of the invention is the use of special service providers making a special provision of bandwidth, i.e., providing “non-blocking bandwidth,” which the patent defines as “bandwidth that will always be available and will always be sufficient.” ’478 patent col. 4 l. 65–col. 5 l. 3. The patent calls this a “key characteristic” of the invention. *Id.* at col. 4 ll. 15–19. It also goes so far as to identify this feature as essential to solving the quality-of-service problem the patent sought to address—stating that “*all* species in the genus of the invention will solve the bandwidth bottleneck that has plagued prior attempts” by using the providers’ data paths in which it is “*guaranteed* to have sufficient bandwidth to be able to handle the worst case bandwidth consumption of the customer.” *Id.* at col. 6 ll. 19–34 (emphasis added). The fact that the patent’s summary section places such emphasis on this feature strongly indicates that the provider’s guarantee of bandwidth is a requirement. *VirnetX*, 767 F.3d at 1318–19 (noting that the summary section “gives primacy” to the attributes discussed therein and “strongly indicates” that the claims require them). Also, it is appropriate to look to the patent’s purpose to inform the claim construction. *Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020) (“A patent’s statement of the de-

in prosecution to be a reference to the “non-blocking bandwidth” discussed in the specification.

scribed invention's purpose informs the proper construction of claim terms."). Here, the patent describes a single solution to the quality-of-service problem: using cooperating service providers that provide non-blocking bandwidth. '478 patent col. 4 l. 65–col. 5 l. 3.

Third, the prosecution of the parent patent, U.S. Patent No. 7,111,163, which shares the same specification, is replete with characterizations of the analogous concept of routing prioritized traffic to participating service providers (specifically, ISPs and ISXs) as being critical. J.A. 816 ("The key thing to note is that . . . [traffic] is routed across the internet over a preplanned, pretested, low hop count, high bandwidth data path by specially selected ISP/ISX providers . . ."); J.A. 817 ("The heart of the invention lies in the specially selected ISPs . . ."); J.A. 818 (describing routing to an "ISP/ISX which has been specially selected and contracted with" to provide favorable treatment for prioritized traffic). While the patentee referred to these as "participating" service providers at the time, it is clear that the patentee was referring to the same concept of routing traffic to special service providers that make a special bandwidth provision. *See Personalized Media Commc'ns*, 952 F.3d at 1340 ("[A]n applicant's repeated and consistent remarks during prosecution can define a claim term by demonstrating how the inventor understood the invention."). Thus, from the inception of the patent family and throughout prosecution, the patentee made clear that it considered the service providers making special bandwidth guarantees to be an essential characteristic. And although ISXs and ISPs may refer to different things in some instances, as relevant here, the '478 patent refers to them both as "providers," and both the patent itself and the patentee in prosecution treated the terms interchangeably with respect to the special bandwidth provision. *See, e.g.*, '478 patent col. 4 ll. 19–37, col. 5 ll. 16–24, col. 5 ll. 50–51, col. 6 l. 22–col. 7 l. 8; J.A. 815–19.

In sum, the '478 patent does not support AlterWAN's proposal for a broad, unbounded plain meaning. The specification lacks even a single mention of the term "cooperating" or "cooperating service provider." The district court appropriately construed the term based on the only written description support found in the specification: its description of providers (e.g., participating ISP/ISXs) that provide non-blocking bandwidth. *See Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1480 (Fed. Cir. 1998) ("[C]laims may be no broader than the supporting disclosure, and therefore . . . a narrow disclosure will limit claim breadth."). AlterWAN's proposal is untethered to the patent's proposed solution and fails to account for the prosecution history that makes the "cooperating service provider" a central point of the invention.

AlterWAN's contrary arguments are unpersuasive. For example, AlterWAN argues that the district court's construction of cooperating service provider in terms of bandwidth conflicts with dependent claims 19, 20, and 21, which discuss separate bandwidth requirements. Appellant's Br. 29. This is essentially a claim differentiation argument. But claim differentiation "is not a rigid rule"; rather, it is a guide among several claim-construction tools. *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1376 (Fed. Cir. 2009). For the reasons just discussed, the prosecution history and written description guide us to the correct construction, as the district court found. Moreover, the limitations in the dependent claims do not necessarily conflict with the requirement for a cooperating service provider to provide non-blocking bandwidth. Claim 19, for example, recites that "the set of one or more transmission paths" (from which the cooperating service provider's path is selected) is identified based on "a requirement associated with at least one of quality of service, latency, bandwidth, or hop count." Plainly, there can be further narrowing of the initial pool of transmission paths based on other requirements associated with bandwidth (or the other listed

criteria) irrespective of the “non-blocking bandwidth” requirement that attaches to cooperating service providers.

AlterWAN also argues that the terms “participating” and “cooperating” should be presumed to have different meanings, thus making the specification’s and prosecution history’s references to participating service providers inapt. Reply Br. 7–14. It is true that different terms may be presumed to have different meanings, “[i]n the absence of any evidence to the contrary.” *CAE Screenplates Inc. v. Heinrich Fiedler GmbH*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). But here, there is ample evidence to the contrary. As noted above, the intrinsic record provides abundant evidence that the patentee treated “participating” and “cooperating” service providers as referring to essentially the same concept—special service providers that provide special (i.e., non-blocking) bandwidth.

We reject AlterWAN’s attempts to broaden the scope of the term “cooperating service provider” beyond that which the specification could reasonably support. Such attempts are particularly unpersuasive given the patentee’s deliberate narrowing of the claims to distinguish prior art based on the same limitation. It would be improper to allow the patentee to assert a breadth of scope not supported by the specification and prosecution history. *See Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1140 (Fed. Cir. 2003).

B

We also see no error in the district court’s construction of the term “non-blocking bandwidth.” Our prior opinion recognized the ambiguity in the district court’s original construction, which used the absolute terms “bandwidth that will *always* be available and will *always* be sufficient” without qualifiers. We observed that a correct construction must “not require bandwidth when the Internet is down,” as such would be impossible, and therefore, we remanded for the district court to make appropriate revisions to its construction. *AlterWAN I*, 63 F.4th at 24. The district

court then, after reviewing further submissions of the parties, “evaluating the experts’ testimony, and analyzing the patent itself,” construed the term as “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.” *Claim Construction Order*, 2024 WL 4635380, at *4.

The district court’s revised construction allays the concerns articulated by our prior opinion. In that opinion, we stated that a construction that “effectively requires a system to provide bandwidth even when the Internet is inoperable[] is not a reasonable construction.” *AlterWAN I*, 63 F.4th at 23. Addressing that point in the remand proceedings, Amazon added the qualifier “while the network is able to transmit data” to its proposed construction, which the district court ultimately adopted. J.A. 72. Amazon’s expert testified that a network is “able to transmit data” in most circumstances except truly catastrophic events that render the network inoperable. J.A. 61–76. Thus, in all but such extreme circumstances, a cooperating service provider must continue to fulfill its commitment to provide bandwidth that will “always be available and will always be sufficient.” Yet, Amazon’s construction provides a limited carve-out to excuse service providers from having to provide bandwidth when it would be impossible. The district court agreed with Amazon and its expert as to appropriate scope of the carve-out and adopted the proposed construction. We see no compelling reason to disturb the district court’s conclusion or findings.

While we primarily look to intrinsic evidence to construe a claim term, extrinsic evidence may be of assistance if the intrinsic record is ambiguous. *Actelion Pharms. LTD v. Mylan Pharms. Inc.*, 85 F.4th 1167, 1173–74 (Fed. Cir. 2023). The ’478 patent and its prosecution history do not identify exceptions to a cooperating service provider’s obligation to provide non-blocking bandwidth. Accordingly, the district court invited expert testimony and conducted a

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hearing to determine how a skilled artisan would understand the term. The district court found Amazon’s expert “very credible” and that Amazon’s construction “properly focuses on the concept that the bandwidth is reserved.” *Claim Construction Order*, 2024 WL 4635380, at *4 n.3, *5. Thus, Amazon’s construction “correctly” incorporates the relevant requirements without requiring the impossible. *Id.* at *4.

AlterWAN does not identify any clear error in the district court’s analysis. *See* Appellant’s Br. 47 (“[T]he clearly-erroneous standard is irrelevant.”). Nor do we discern any on our review of this record. The district court’s construction of “non-blocking bandwidth” rests on factual findings with respect to extrinsic evidence, namely, the parties’ experts. *Claim Construction Order*, 2024 WL 4635380, at *4–6. Having found no clear error in the district court’s subsidiary fact finding, we see no basis to overturn the district court’s construction of “non-blocking bandwidth.”

* * *

In summary, the district court’s constructions of “cooperating service provider” and “non-blocking bandwidth” are correct. Accordingly, we affirm the stipulated judgment of noninfringement of claims 18 and 51 of the ’478 patent predicated on those constructions.

II

Because we affirm the district court’s judgment of non-infringement, we do not reach AlterWAN’s arguments regarding the exclusion of its damages expert.

CONCLUSION

We have considered AlterWAN’s remaining arguments and find them unpersuasive. For the foregoing reasons, we affirm the district court’s decision.

AFFIRMED

NOTE: This disposition is nonprecedential.

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Maryellen Noreika.

SUBRAMANIAN, *District Judge*, dissenting.

I see no issue with the majority’s construction of the term “non-blocking bandwidth.” There’s just one problem. “Non-blocking bandwidth” isn’t a claim term in this case.

The claims at issue—claims 18 and 51 of the ’478 patent—instead use the term “cooperating service provider.” That term doesn’t appear in the specification of the ’478 patent. Usually in these circumstances, we would revert to the term’s plain and ordinary meaning. Given the everyday words comprising this term—“cooperating” and “service provider”—it could mean something as simple as a service

provider that joins the network described by the '478 patent's claims, with context provided by the other claim elements. *See, e.g.*, Cl. 18 (requiring the identification of a "minimum transmission requirement," selection of "transmission paths from a table" meeting that requirement, selection of "a transmission path between cooperating service providers" based on "minimized link cost," and then transmission of data using that path).

So how did we get down the rabbit hole of first defining "non-blocking bandwidth," and then inserting that construction into the definition of "cooperating service provider," so that we end up with the mouthful: "service provider that agrees to provide bandwidth that will always be available and will always be sufficient while the network is able to transmit data"?

The majority opinion starts with the prosecution history of the '478 patent. Majority Op. at 5. But this Court has previously recognized that "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc). That lack of clarity is reflected in the main passage pointed to by the majority. Here it is in its entirety:

[T]here is no disclosure that Applicant could find in Roberts relating to "cooperating service providers." Related to the last point just discussed, Roberts deals with routing at the switch level to nearest available nodes using conventional ATM or IP routing protocols—the concept of "hop count" (e.g., as a form of link cost) seems to be inconsistent with this, i.e., in Roberts, each switch seems to simply manage connections to nearest available

nodes, such that there is no equivalent of hop count. In the context of Applicant's disclosure, cooperating service providers may be separated by multiple path connections, which is to say, there may be a choice between routes having acceptable bandwidth correspond to paths between cooperating service providers that have prearranged for blocked bandwidth, and this choice can be resolved according to link cost.

J.A. 747 (cited in Majority Op. at 5). It's an understatement to say this snippet "lacks clarity." But the main point appears to be that the Roberts reference doesn't incorporate the concept of "link cost," which just means assessing the "hops" on a transmission path to reduce delays. In the Roberts reference, connections are managed among the nearest available locations, so link cost isn't something that needs to be addressed. But in the present invention, because "cooperating service providers may be separated by multiple path connections . . . this choice can be resolved according to link cost."

That's the distinction drawn between the present invention and Roberts, and it has nothing to do with any concept of "non-blocking bandwidth." The majority appears to seize on the following phrase: that "there may be a choice between routes having acceptable bandwidth correspond [sic] to paths between cooperating service providers *that have prearranged for blocked bandwidth.*" (Emphasis added.) Whatever can be drawn from this line, it isn't an attempt to narrow the definition of "cooperating service provider" to avoid the prior art. As noted above, the inventor's argument concerning Roberts didn't have to do with the data-handling capabilities of a "cooperating service provider," but rather the fact that there might be a bunch of them, and so the selection of which path to take would be determined by link cost. *See SEB S.A. v. Montgomery Ward*

& Co., 594 F.3d 1360, 1370–71 (Fed. Cir. 2010) (declining to read prosecution remarks as limiting claim scope where, “read in context,” the applicant “was only addressing” a different feature in distinguishing the prior art, and concluding that the proposed disclaimer “stretches this prosecution history too far”).

But even if this snippet did have import for claim construction purposes, how does the majority get from “blocked bandwidth,” the term used in the prosecution history, to “non-blocking bandwidth,” which isn’t mentioned? The majority’s reasoning is in a footnote: It concludes that the district court reasonably equated the two terms purportedly because the “crux” of the invention is to use cooperating service providers that provide non-blocking bandwidth. Majority Op. at 5 n.2. As an initial matter, one would think that “blocked” and “non-blocking” refer to different things. But at the very least, they are different words. So now, (1) a term that isn’t in the claim (“blocked bandwidth”) is (2) equated to another term that isn’t in the claim (“non-blocking bandwidth”), (3) the latter term is defined and made part of the definition of the claim term (“cooperating service provider”), based on (4) a snippet from the prosecution history dealing with an entirely different issue. That’s not typically how claim construction works.¹

¹ If the reader is curious, the other snippet from the prosecution history that the majority opinion points to is even further afield. *See* J.A. 867 (cited in Majority Op. at 6). It simply refers to routing traffic over “blocked bandwidth routes,” and then says that “an internet router can route normal traffic using a hop based method but identifies and segregates prioritized traffic (e.g., corresponding to a premium service) and routes this traffic to a cooperating service provider (e.g., over a direct connection) using a special table.” There’s no definition of “cooperating service

The majority then turns to the specification of the '478 patent. It says that the “essence of the invention” is the use of special service providers that provide “non-blocking bandwidth,” a term that is defined in the specification as “bandwidth that will always be available and always be sufficient.” Majority Op. at 6. And sure enough, the specification notes that “[p]articipating ISX facilities agree to provide non-blocking bandwidth between their sites.” '478 patent col. 5 l. 3. But “participating ISX facilities” isn’t the claim term under review. What’s more is that “cooperating service providers” include both so-called ISXs *and ISP providers*, and the latter isn’t mentioned here. Why not, if the inventor was really trying to define “cooperating service providers” as a whole? The majority doesn’t say. Finally, the line in question indicates that ISX facilities agree to provide so-called “non-blocking bandwidth” just between “their sites,” and there’s no clarification in the patent, or in the majority’s opinion, as to what that means exactly. Does that refer to the provider’s internal connections, rather than the provider’s connections to the wider network backbone? In short, this snippet isn’t the kind of specification reference that typically warrants being imported into a claim term’s definition. *See, e.g., Maquet Cardiovascular LLC v. Abiomed Inc.*, 131 F.4th 1330, 1344 (Fed. Cir. 2025) (“As to disavowals made in the specification, the patentee must limit the claim scope using words or expressions of manifest exclusion or restriction.” (cleaned up)); *Continental Circs. LLC v. Intel Corp.*, 915 F.3d 788, 796–97 (Fed. Cir. 2019) (rejecting limitation drawn from specification where “none of the statements relied upon by the district court rises to the level of a clear and unmistakable disclaimer” (cleaned up)).

provider” here, and certainly no reference to “non-blocking bandwidth.”

And here, there's even more reason to be cautious about inferring limitations on claim terms from the specification, given that the specification says different things about these providers in different places. For example, the specification says that "preselected ISX/ISP facilities" are simply "ones which provide high-bandwidth, low hop-count data paths to the other ISX/ISP facilities along the private tunnel." '478 patent col. 4 ll. 23–26. And that is also how the ISP and ISX providers are described in the prosecution history for the '478 patent's parent, which the majority also relies on, J.A. 819 (noting the "[s]election of only the ISP and ISX partners that deliver high bandwidth, low latency, low hop count data paths"). Of course, having "high bandwidth" isn't the same as having bandwidth that's "always sufficient" and "always available," per the majority's definition of "non-blocking bandwidth."²

The majority also focuses on language in the specification explaining the advantages of the invention, e.g., that "all species in the genus of the invention will solve the bandwidth bottleneck problem that has plagued prior attempts," and that the network is "guaranteed to have sufficient bandwidth to be able to handle the worst case

² To the extent anything is to be drawn from the prosecution history of the '478 patent's parent, it undermines the majority's interpretation. For example, when the disclosure clarifies what "high bandwidth" means, it doesn't take the absolutist position adopted by the majority—always available, always sufficient, no matter what. Instead, it explains that chosen providers have "an *average* available bandwidth which substantially exceeds the worst case bandwidth consumption of AlterWAN packets." J.A. 819 (emphasis added). Of course, average capacity says nothing about availability and sufficiency all the time. Indeed, there would be no need to talk about "averages" if the majority's absolutist position was correct.

bandwidth consumption of the customer.” ’478 patent col. 6 ll. 19–20, 31–34. But the way the patent accomplishes those things, according to the specification, isn’t through “cooperating service providers”—again, a term that *does not appear* in the specification. Instead, the specification says that these solutions are accomplished “by implementing AlterWAN routing strategies,” *id.* col. 6 ll. 21–22, and by virtue of the “data path” employed by the network, *id.* col. 6 ll. 30–33. The majority appears to take the perceived advantages of the claimed invention as a whole and compress them into the definition of a single, ancillary term. *But see E-Pass Technologies, Inc. v. 3Com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003) (“The court’s task is not to limit claim language to . . . serve a perceived ‘purpose’ of the invention.”).

And while the majority focuses on snippets of prosecution history and vague language in the specification, it ignores the claims of the ’478 patent themselves, where the claim-construction inquiry “begins and ends.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998); *see also Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998) (explaining that “within the intrinsic evidence . . . there is a hierarchy of analytical tools,” and “[t]he actual words of the claim are the controlling focus”). The claims here reveal that the majority’s construction is flat wrong.

Remember that on the majority’s reading, a “cooperating service provider” agrees to provide non-blocking bandwidth, that is, “bandwidth that will *always* be available and will *always* be sufficient.” But numerous claims in the ’478 patent reflect that “cooperating service providers” may *not* have sufficient bandwidth, and may need to be excluded from the locations through which data can be sent. *See, e.g.*, ’478 patent cl. 21 (pruning locations “not associated with bandwidth sufficient to meet the load”); cl. 29 (eliminating “locations that do not meet the minimum bandwidth requirement”); cl. 58 (eliminating locations

“that do not meet the minimum transmission requirement”); cl. 66 (“eliminating from the set locations not associated with bandwidth sufficient to meet the load”). The majority’s construction renders meaningless these claim limitations. *But see Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (noting that “claims are interpreted with an eye toward giving effect to all terms in the claim” and rejecting a construction that would render “characteristics specifically described in a claim . . . merely superfluous”); *Ortho-McNeil Pharma., Inc. v. Caraco Pharma. Lab’ys, Ltd.*, 476 F.3d 1321, 1327–28 (Fed. Cir. 2007) (rejecting a claim construction that would have “render[ed] meaningless another claim’s limitation”); *Cat Tech LLC v. TubeMaster, Inc.*, 528 F.3d 871, 885 (Fed. Cir. 2008) (same).

The ’478 patent has expired and it has a tortured litigation history. But these aren’t reasons to jump through hoops to reach an incorrect, and fatal, construction of the patent’s claims. With great respect, I dissent from the majority’s construction of “cooperating service provider.”