

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

**COX COMMUNICATIONS, INC., COXCOM, LLC,
COX ARKANSAS TELCOM LLC, COX
COMMUNICATIONS ARIZONA LLC, COX ARIZONA
TELCOM LLC, COX CALIFORNIA TELCOM LLC,
COX COMMUNICATIONS CALIFORNIA LLC, COX
COLORADO TELCOM LLC, COX CONNECTICUT
TELCOM LLC, COX DISTRICT OF COLUMBIA
TELCOM LLC, COX FLORIDA TELCOM LP, COX
COMMUNICATIONS GEORGIA LLC, COX
GEORGIA TELCOM LLC, COX IOWA TELCOM LLC,
COX IDAHO TELCOM LLC, COX
COMMUNICATIONS KANSAS LLC, COX KANSAS
TELCOM LLC, COX COMMUNICATIONS GULF
COAST LLC, COX COMMUNICATIONS LOUISIANA
LLC, COX LOUISIANA TELCOM LLC, COX
MARYLAND TELCOM LLC, COX MISSOURI
TELCOM LLC, COX NEBRASKA TELCOM LLC,
COX COMMUNICATIONS OMAHA LLC, COX
COMMUNICATIONS LAS VEGAS INC., COX
NEVADA TELCOM LLC, COX NORTH CAROLINA
TELCOM LLC, COX OHIO TELCOM LLC, COX
OKLAHOMA TELCOM LLC, COX RHODE ISLAND
TELCOM LLC, COX COMMUNICATIONS
HAMPTON ROADS, LLC, COX VIRGINIA TELCOM
LLC,**

Plaintiffs-Appellees

v.

**SPRINT COMMUNICATION COMPANY LP,
SPRINT SPECTRUM, L.P., SPRINT SOLUTIONS,
INC.,**

Defendants-Appellants

CISCO SYSTEMS, INC.,
Defendant

2016-1013

Appeal from the United States District Court for the District of Delaware in No. 1:12-cv-00487-SLR, Judge Sue L. Robinson.

Decided: September 23, 2016

MICHAEL LOUIS BRODY, Winston & Strawn LLP, Chicago, IL, argued for plaintiffs-appellees. Also represented by STEFFEN NATHANAEL JOHNSON, EIMERIC REIG-PLESSIS, Washington, DC; DAVID SPENCER BLOCH, San Francisco, CA; KRISHNAN PADMANABHAN, New York, NY.

J. MICHAEL JAKES, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Washington, DC, argued for defendants-appellants. Also represented by BASIL TRENT WEBB, PETER EMANUEL STRAND, AARON E. HANKEL, JOHN D. GARRETSON, RYAN DYKAL, Shook, Hardy & Bacon, LLP, Kansas City, MO; ROB RECKERS, Houston, TX.

Before PROST, *Chief Judge*, NEWMAN and BRYSON, *Circuit Judges*.

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

Opinion concurring in the judgment filed by *Circuit Judge* NEWMAN.

PROST, *Chief Judge*.

Sprint Communication Company LP and its affiliates (collectively, “Sprint”) appeal from a final decision of the United States District Court for the District of Delaware finding that the asserted claims of U.S. Patent Nos. 6,452,932; 6,463,052; 6,633,561; 7,286,561; 6,298,064; and 6,473,429 (collectively, “the asserted patents”) are invalid as indefinite under 35 U.S.C. § 112, ¶ 2. Because “processing system” does not prevent the claims, read in light of the specification and the prosecution history, from informing those skilled in the art about the scope of the invention with reasonable certainty, we reverse.

BACKGROUND

The asserted patents relate to developments in voice-over-IP technology. Voice-over-IP allows telephone calls to be transmitted over the internet, instead of through traditional telephone lines. Voice-over-IP has the ability to work with traditional telephone lines, however, such that calls initiated on a traditional telephone can be converted to packets of information and transmitted over the internet. At the receiving end, they are converted back to a traditional voice signal.

The asserted patents discuss the hand-off between traditional telephone lines (a “narrow-band network” or “circuit-switched network”) and a data network (a “broad-band network” or “packet-switched network”), such as the internet. They can be divided into two groups: U.S. Patent Nos. 6,452,932 (“932 patent”); 6,463,052 (“052 patent”); 6,633,561 (“3,561 patent”); and 7,286,561 (“6,561 patent”) (collectively, the “control patents”) share a specification, and U.S. Patent Nos. 6,298,064 (“064 patent”) and 6,473,429 (“429 patent”) (collectively, the

“ATM¹ interworking patents”) share a different specification.

Both sets of patents describe the use of a “processing system,” which receives a signal from a traditional telephone network and processes information related to that voice call to select the path that the voice call should take through the data network. In the control patents, a “communications control processor” (“CCP”) “selects the network elements and the connections that comprise the communications path.” ’3, 561 patent col. 6 ll. 18–20. In the ATM interworking patents, a “signaling processor” (or, in preferred embodiments, a “call/connection manager” (“CCM”)) selects the virtual connections by which the call will pass through the ATM network and performs other call processing functions, such as validation, echo control, and billing. ’064 patent col. 4 ll. 47–54, col. 6 ll. 54–59, col. 7 ll. 13–16. Both specifications disclose that logic for selecting a communication path resides in look-up-tables, which the CCP or CCM relies on in making selection(s). ’3, 561 patent col. 19 ll. 1–27, col. 19 l. 33–col. 20 l. 6; ’064 patent col. 7 ll. 21–30.

At issue in this appeal is the definiteness of “processing system” as it is used in the context of the patents. Among the control patents, the independent claims at issue are: claim 1 of the ’932 patent, claim 1 of the ’052 patent, claims 1 and 24 of the ’3,561 patent, and claim 11 of the ’6,561 patent. Claim 1 of the ’3, 561 patent is exemplary:

1. A method of operating a *processing system* to control a packet communication system for a user communication, the method comprising:

¹ “ATM” stands for “Asynchronous Transfer Mode,” which is a certain type of broadband network that can be used in voice-over-IP systems.

receiving a signaling message for the user communication from a narrowband communication system into the *processing system*;

processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communication;

generating a control message indicating the network code;

transferring the control message from the *processing system* to the packet communication system;

receiving the user communication in the packet communication system and using the network code to route the user communication through the packet communication system to the network element; and

transferring the user communication from the network element to provide egress from the packet communication system.

'3, 561 patent col. 22 ll. 12–32 (emphases added).

Among the ATM interworking patents, claim 1 of the '064 patent and claim 1 of the '429 patent are the independent claims at issue. Claim 1 of the '064 patent is exemplary:

1. A communication method for a call comprising:

receiving set-up signaling associated with the call into a *processing system*;

processing the set-up signaling in the *processing system* to select a DS0 connection;

generating a message identifying the DS0 connection;

transmitting the message from the *processing system*;

receiving the message and an asynchronous communication associated with the call into an interworking unit;

in the interworking unit, converting the asynchronous communication into a user communication; and

transferring the user communication from the interworking unit to the DS0 connection in response to the message.

'064 patent col. 23 ll. 28–41 (emphases added).

PROCEDURAL HISTORY

This case rests against the backdrop of multi-district litigation between these parties and others. On December 19, 2011, Sprint sued Cox Communications, Inc. and Cox Communications Kansas, LLC in the District of Kansas, asserting infringement of twelve patents, which included the six patents at issue here. That same day, Sprint also filed suit against Comcast Cable Communications, Inc. (“Comcast”), Cable One, Inc. (“Cable One”), and Time Warner Cable Inc. (“Time Warner Cable”) in the District of Kansas asserting the same twelve patents.

On April 16, 2012, Cox Communications, Inc., Cox Communications Kansas, LLC, and thirty of their affiliates (collectively, “Cox”) initiated the instant case, filing a complaint in the District of Delaware seeking declaratory judgment that Sprint’s twelve patents were invalid and not infringed. Cox filed a motion to transfer the Kansas action to Delaware, which was granted on September 14, 2012. Sprint consequently counterclaimed for infringement of the twelve patents and several others.

Sprint’s actions against Comcast, Cable One, and Time Warner Cable remained in the District of Kansas

and were consolidated for discovery purposes. These cases proceeded to claim construction, where on October 9, 2014, the district court decided, among other things, that the term “processing system” was not indefinite, but did not warrant a construction. J.A. 838–41.

Approximately four months later, on February 27, 2015, Cox moved for partial summary judgment in the instant case on the grounds that the claim term “processing system” rendered the asserted patents indefinite under 35 U.S.C. 112, ¶ 2. On May 15, 2015, the district court granted Cox’s motion, finding that the claims were indefinite because they “contain[] a structural limitation, ‘processing system,’” which is “functionally described by the claims and in the specifications” and these descriptions “do not pass muster under *Nautilus* as a person of ordinary skill in the art is not provided with the bounds of the claimed invention.” J.A. 17–19. The district court also found that extrinsic evidence did not save the claims, because “there is no ‘established meaning in the art’” for “processing system,” because other patents use this term in different ways and because the parties did not provide (nor could the district court discern, looking at computer dictionaries) a definition for “processing system.” J.A. 19.

Sprint appeals the grant of summary judgment of invalidity for indefiniteness. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review a district court’s grant of summary judgment that a claim is indefinite de novo, applying the same standards as the district court. *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). The ultimate conclusion that a claim is indefinite

under 35 U.S.C. § 112, ¶ 2² is a legal conclusion, which we review de novo. *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1364 (Fed. Cir. 2015). As in claim construction, we review a district court’s underlying factual determinations for clear error. *Id.*; see *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 840 (2015). “Any fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003). If indefiniteness can be determined based solely on intrinsic evidence, our review is de novo. See *Teva Pharm. USA, Inc.*, 135 S. Ct. at 840.

At the outset, we note that the parties have agreed that “processing system” is not a means-plus-function term. J.A. 20, n.9. Accordingly, we confine our review to the same question presented to the district court: whether “processing system” renders the asserted patents indefinite under 35 U.S.C. § 112, ¶ 2.

Section 112 requires that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112, ¶ 2. This provision strikes a “delicate balance” which recognizes that, although the definiteness requirement must tolerate “[s]ome modicum of uncertainty” as “the price of ensuring the appropriate incentives for innovation,” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128–29 (2014) (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731

² The America Invents Act (AIA), Pub. L. No. 112–29, effective September 16, 2012, has newly designated § 112, ¶ 2 as § 112(b) and § 112, ¶ 6 as § 112(f). Because the asserted patents stem from applications that were filed before the effective date of the AIA, we will refer to the pre-AIA versions of these provisions.

(2002)) (internal quotation marks omitted), a patent must nevertheless “be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996)) (internal quotation marks omitted). Accordingly, “a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.* at 2129.

This case presents a peculiar scenario: the sole source of indefiniteness that Cox complains of, “processing system,” plays no discernable role in defining the scope of the claims. All of the asserted claims are method claims, and the point of novelty resides with the steps of these methods, not with the machine that performs them. “Processing system” is merely the locus at which the steps are being performed. The plain language of the claims proves this point: if claim 1 of the ’3,561 patent (which the parties agree is exemplary for the control patents) were revised to remove the word “processing system,” the meaning would not discernably change:

<u>'3,561 patent, claim 1, with "processing system"</u>	<u>'3,561 patent, claim 1, without "processing system"</u>
<p>1. A method of operating a <i>processing system</i> to control a packet communication system for a user communication, the method comprising:</p> <p>receiving a signaling message for the user communication from a narrowband communication system into the <i>processing system</i>;</p> <p>processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communication;</p> <p>...</p> <p>transferring the control message from the <i>processing system</i> to the packet communication system</p> <p>...</p>	<p>1. A method to control a packet communication system for a user communication, the method comprising:</p> <p>receiving a signaling message for the user communication from a narrowband communication system;</p> <p>processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communication;</p> <p>...</p> <p>transferring the control message to the packet communication system</p> <p>...</p>

This modification removes the clarification that the "processing system" is what performs the "processing" and receives and sends certain signals, but even without this clarification, the same steps would have to be performed.

(And, from the nature of the invention, they would have to be performed on some kind of computing device.) The same is true of claim 1 of the '064 patent (which the parties agree is exemplary for the ATM interworking patents):

<u>'064 patent, claim 1, with "processing system"</u>	<u>'064 patent, claim 1, without "processing system"</u>
<p>1. A communication method for a call comprising:</p> <p>receiving set-up signaling associated with the call into a <i>processing system</i>;</p> <p>processing the set-up signaling in the <i>processing system</i> to select a DS0 connection;</p> <p>...</p> <p>transmitting the message from the <i>processing system</i>;</p> <p>...</p>	<p>1. A communication method for a call comprising:</p> <p>receiving set-up signaling associated with the call;</p> <p>processing the set-up signaling to select a DS0 connection;</p> <p>...</p> <p>transmitting the message;</p> <p>...</p>

If “processing system” were not omitted but replaced with “computer,” a similar conclusion results. Indeed, at oral argument, both parties agreed that substituting “computer” for “processing system” would not change the scope of the claims. Oral Argument at 10:19–32, 14:57–15:05, *available at* <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2016-1013.mp3> [hereinafter *Oral Argument*]; *see also Oral*

Argument at 11:55–12:18, 14:42–14:57 (acknowledging that “processing system” is a general purpose computer).

If “processing system” does not discernably alter the scope of the claims, it is difficult to see how this term would prevent the claims (the remainder of which Cox does not challenge on indefiniteness grounds) from serving their notice function under § 112, ¶ 2. As *Nautilus* instructs, the dispositive question in an indefiniteness inquiry is whether the “claims,” not particular claim terms, “read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”³ 134 S. Ct. at 2129. To be sure, we have generally acknowledged that an indefiniteness analysis under 35 U.S.C. § 112, ¶ 2 is “inextricably intertwined with claim construction.” *Atmel Corp. v. Info.*

³ The concurrence adopts this same point at base, agreeing that *Nautilus* provides “[t]he operative criterion” for questions under § 112, ¶ 2. Concurring Op. at 6. Nevertheless, it appears to take great issue with our method of analysis, which it interprets as creating a “new protocol” that hinges on “deleting the challenged term from the claims.” *Id.* at 2, 6. Our opinion today does no such thing. Rather, we compare versions of the claims that contain and then exclude “processing system” simply as a way of illustrating how *Nautilus* applies to the claims at issue: *Nautilus* focuses on whether the “claims . . . fail to inform,” 134 S. Ct. at 2129, and the comparison reveals that this conclusion depends largely on the remainder of the claim language, not the “processing system” term. It follows then that, because it has little impact on this ultimate question, it would be difficult for “processing system” to be a source of indefiniteness. This conclusion derives only from an application of *Nautilus* to the claims at issue and invites no change to the law of § 112, ¶ 2.

Storage Devices, Inc., 198 F.3d 1374, 1379 (Fed. Cir. 1999). Accordingly, the common practice of training questions of indefiniteness on individual claim terms is a helpful tool. Indeed, if a person of ordinary skill in the art cannot discern the scope of a claim with reasonable certainty, it may be because one or several claim terms cannot be reliably construed. *See, e.g., Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1374 (Fed. Cir. 2014) (finding the phrase “unobtrusive manner” rendered claims indefinite because, even after consulting the claims, specification, and prosecution history, a skilled artisan would be left “to consult the unpredictable vagaries of any one person’s opinion”) (citations and internal quotation marks omitted). Nevertheless, indefiniteness under § 112, ¶ 2 must ultimately turn on the question set forth by *Nautilus*: whether the “claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.* at 2129 (emphasis added). Applied here, “processing system” does not prevent the claims from doing just that.

Cox nevertheless contends that “processing system” is indefinite because the asserted claims only describe it in functional terms. We disagree. Claims are not per se indefinite merely because they contain functional language.⁴ *See also Microprocessor Enhancement Corp. v.*

⁴ We note, however, that in the context of 35 U.S.C. § 112, ¶ 6, we require that, if a patentee writes his claims in “means-plus-function” form, he must “disclose the particular structure that is used to perform the recited function.” *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009). This is intended to avoid “pure functional claiming,” where a patentee “claim[s] all possible means of achieving a function.” *Id.* However, by agreeing that “processing system” is not a

Tex. Instruments Inc., 520 F.3d 1367, 1375 (Fed. Cir. 2008) (citing *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008)) (“[A]pparatus claims are not necessarily indefinite for using functional language”). Indeed, here, functional language promotes definiteness because it helps bound the scope of the claims by specifying the operations that the “processing system” must undertake. All of the asserted claims are method claims, so it makes sense to define the inventive method as a series of functions.

Further, Cox cannot complain that the specific functional limitations that describe the operation of the “processing system” in the asserted patents fail to provide sufficient clarity under *Nautilus*. For example, in the control patents, claim 1 of the ’3,561 patent requires that the “method of operating a processing system . . . process[es] the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communi-

means-plus-function term, Cox has already conceded that “processing system” itself recites sufficiently definite structure and there is no problem of “pure functional claiming” here. See *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc) (“[W]hen a claim term lacks the word ‘means,’ . . . § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to ‘recite[] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000))). Indeed, the claims specify that the claimed functions are achieved through the use of the “processing system,” which the parties agree is, as used in the context of the patents here, a general purpose computer. *Oral Argument* at 11:55–12:18, 14:42–14:57.

ation.” The specification discloses, as an embodiment of a “processing system,” the CCP and provides details about how it functions to “select[] the network elements and the connections that comprise the communications path.” ’3,561 patent col. 6 ll. 23–25. Notably, the specification provides certain algorithmic details, including that “selections are made through table look-ups and SCP queries,” *id.* at col. 14 ll. 45–48, and provides detail about how these queries are constructed, *see, e.g., id.* at col. 14 ll. 49–51, and the types of information that are used to determine these mappings, *see, e.g., id.* at col. 19 ll. 36–40. These disclosures are sufficiently detailed such that, reading claim 1 in light of the specification, a person of ordinary skill in the art would understand claim 1’s requirement that the “method of operating a processing system . . . process[es] the signaling message to select a network code . . .” with reasonable certainty.

As another example, in the ATM interworking patents, claim 1 of the ’064 patent requires the step of “processing the set-up signaling in the processing system to select a DS0 connection.” In the specification, the ’064 patent discloses the CCM as an embodiment of a “processing system” and provides details about how it “receive[s] and process[es] . . . signaling to select connections, and to generate and transmit signaling identifying the selections.” ’064 patent col. 6 ll. 57–59. Similar to the specification of the control patents, the specification of the ’064 patent describes that “[t]he selection process can be accomplished through table look-ups,” *id.*, col. 7 ll. 20–21, and provides detail about how the look-up process happens, *see id.* at col. 7 ll. 21–30. Accordingly, a person of ordinary skill in the art would understand claim 1’s step of “processing the set-up signaling in the processing system to select a DS0 connection . . .” with reasonable certainty.

In sum, “processing system” does not render the claims indefinite because it does not prevent the claims,

read in light of the specification and the prosecution history, from informing those skilled in the art about the scope of the invention with reasonable certainty. Although the asserted patents describe the operation of the “processing system” in largely functional terms, the recited steps, read in light of the specification, provide sufficient detail such that a person of ordinary skill in the art would understand them with reasonable certainty.

CONCLUSION

For the foregoing reasons, we reverse the district court’s conclusion that the term “processing system” renders the asserted claims indefinite under § 112, ¶ 2.

REVERSED

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

**COX COMMUNICATIONS, INC., COXCOM, LLC,
COX ARKANSAS TELCOM LLC, COX
COMMUNICATIONS ARIZONA LLC, COX ARIZONA
TELCOM LLC, COX CALIFORNIA TELCOM LLC,
COX COMMUNICATIONS CALIFORNIA LLC, COX
COLORADO TELCOM LLC, COX CONNECTICUT
TELCOM LLC, COX DISTRICT OF COLUMBIA
TELCOM LLC, COX FLORIDA TELCOM LP, COX
COMMUNICATIONS GEORGIA LLC, COX
GEORGIA TELCOM LLC, COX IOWA TELCOM LLC,
COX IDAHO TELCOM LLC, COX
COMMUNICATIONS KANSAS LLC, COX KANSAS
TELCOM LLC, COX COMMUNICATIONS GULF
COAST LLC, COX COMMUNICATIONS LOUISIANA
LLC, COX LOUISIANA TELCOM LLC, COX
MARYLAND TELCOM LLC, COX MISSOURI
TELCOM LLC, COX NEBRASKA TELCOM LLC,
COX COMMUNICATIONS OMAHA LLC, COX
COMMUNICATIONS LAS VEGAS INC., COX
NEVADA TELCOM LLC, COX NORTH CAROLINA
TELCOM LLC, COX OHIO TELCOM LLC, COX
OKLAHOMA TELCOM LLC, COX RHODE ISLAND
TELCOM LLC, COX COMMUNICATIONS
HAMPTON ROADS, LLC, COX VIRGINIA TELCOM
LLC,**

Plaintiffs-Appellees

v.

**SPRINT COMMUNICATION COMPANY LP,
SPRINT SPECTRUM, L.P., SPRINT SOLUTIONS,
INC.,**

Defendants-Appellants

CISCO SYSTEMS, INC.,
Defendant

2016-1013

Appeal from the United States District Court for the District of Delaware in No. 1:12-cv-00487-SLR, Judge Sue L. Robinson.

NEWMAN, *Circuit Judge*, concurring in the judgment.

I agree with the court's holding that the claims are not invalid on the ground of indefiniteness. However, the court creates an interesting, but flawed, new mode of analysis, whereby the adjudicator (1) first removes the challenged term from the claim, then (2) decides whether the claim has the same meaning without the challenged term, and (3) if the answer is "yes," rules that the claim is not indefinite as a matter of law. Maj. Op. at 10–12. This new style of claim construction will confound the already confused determination of patent rights. I write to protest this further inroad on a reasoned and reliable law of patents.

No precedent supports the court's new protocol of claim construction, whereby definiteness of the claim is deemed proved because "if claim 1 of the '3,561 patent . . . were revised to remove the term 'processing system,' the meaning would not discernably change." Maj. Op. at 9. The court criticizes the parties for arguing about the indefiniteness of "processing system" as resulting in a "peculiar scenario," since, in the majority's view, the term "processing system," despite its presence in three

clauses of claim 1 and other claims, “plays no discernable role in defining the scope of the claims.” *Id.* However, claim 1 is for a “method of operating a processing system” by performing the six specified steps in the claim. This is not a peculiar scenario.

Cox argues that the term “processing system,” by its asserted indefiniteness, “would prevent the claims . . . from serving their notice function,” *Maj. Op.* at 12, based on the position that the term is not adequately supported by structure. The district court so found. The court today does not discuss this finding, instead simply holding that definiteness is determined by removing the challenged term from the claim in order to discover whether the claim has the same construction without the challenged term. I cannot discern how a claim can have the same meaning and scope with and without a critical term that limits three clauses of the claim. I show claim 1 of the ’3,561 patent, with boldface added to the usages of “processing system”:

1. A method of operating a **processing system** to control a packet communication system for a user communication, the method comprising:

receiving a signaling message for the user communication from a narrowband communication system into the **processing system**;

processing the signaling message to select a network code that identifies a network element to provide egress from the packet communication system for the user communication;

generating a control message indicating the network code;

transferring the control message from the **processing system** to the packet communication system;

receiving the user communication in the packet communication system and using the network code to route the user communication through the packet communication system to the network element; and

transferring the user communication from the network element to provide egress from the packet communication system.

'3,561 patent, claim 1 (emphases added).

I agree with the panel majority that the use of functional terms is not an automatic badge of invalidity, and that the context, specification, and knowledge in the art must be considered. My concern is with the court's method of analysis. Functional terms in patents are not prohibited, but they must meet the statutory requirements, including:

35 U.S.C. §112(a) *In general*.— The specification shall contain a written description of the invention, and of the manner and practice of making and using it, in such full clear, concise, and exact terms as to enable an person skilled in the art to which it pertains . . . to make and use the same, and shall set forth the best mode contemplated by the inventor . . . of carrying out the invention.

(b) *Conclusion*.— The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor . . . regards as the invention.

Here the patentee claimed a method of operating a processing system, comprising six steps. The court's new analytical method, whereby the challenged term is removed from the claim and the court then decides whether the claim is of the same meaning and scope, Maj. Op. at

10–11, is neither legally correct nor plausible.¹ I urge the court to return to the traditional method of claim analysis.

Under traditional claim analysis, I agree that the claims presented for review are not invalid on the ground of indefiniteness. The evidentiary record supports the conclusion that “processing system” had an understood meaning within the telecommunications industry, and the expert testimony and publications support the meaning as a “system that processes signaling to assist in call control,” Declaration of Stephen B. Wicker, Ph.D, at 32 (J.A. 989), and that it would be so understood by persons having ordinary skill in this field, Supplemental Wicker Declaration at 4 (J.A. 997).

The district court ruled that “processing system” is indefinite because of insufficient disclosure of the structure that performs each claim step. The district court stated that the physical structures were only “functionally described by the claims and in the specifications,” that they did not provide “a person of ordinary skill in the art . . . with the bounds of the claimed invention,” and

¹ I take note that the court, while agreeing with the parties that the claims before us are not in means-plus-function form, nonetheless misapplies that law in stating that “by agreeing that ‘processing system’ is not a means-plus-function term, Cox has already conceded that ‘processing system’ itself recites sufficiently definite structure and there is no problem of ‘pure functional claiming’ here.” Maj. Op. at 13–14 n.4. However, agreeing that “processing system” is not in means-plus-function form is not a concession of structural support. Support is subject to analysis on the facts of the particular case, as for every invention.

thus did “not pass muster under *Nautilus*.” Dist. Ct. Op. at 9–10.

The *Nautilus* question is whether “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). The district court stopped short, for this court has elaborated that even for apparatus claims the “recitation of . . . function” is “highly relevant to ascertaining the boundaries” of a claim. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1383 (Fed. Cir. 2015). We explained that the “claim language, specification, and figures” should “provide sufficient clarity to skilled artisans as to the bounds of the disputed term.” *Id.* at 1382–83. The district court here focused inappropriately on structural limits, whereas these limitations are all steps in a method, not an apparatus. The operative criterion is whether the claim, read in light of the specification and prosecution history, informs skilled artisans of the scope of the invention with reasonable certainty. *Nautilus*, 134 S. Ct. at 2129. Judicial determination of compliance with this requirement is not achieved by deleting the challenged term from the claims.²

When method claims include functional limitations, the claims must meet the statutory requirements, including specificity and enablement. There is extensive precedent, in a variety of factual situations, guiding the analysis of whether the claim, viewed as a whole, “particularly point[s] out and distinctly claim[s] the subject

² The Majority states that it “does no such thing,” Maj. Op. at 12 n. 3, although the deletions from the claims are highlighted on two pages of diagrams “omit[ing]” the term, *id.* at 11, without guidance as to limits, standards, and reasoning.

matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b). The inquiry “focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the rest of the specification.” *Energizer Holdings, Inc. v. Int’l Trade Comm’n*, 435 F.3d 1366, 1370 (Fed. Cir. 2006).

Sprint points to the description in the specification, as support for the definiteness of the claimed processing system. The specification states that the processing system “comprises an interface that is external to the Switches,” ’3,561 Patent at 3:53–56, with a signaling translator, a processor, and associated memory for processing information to select network characteristics. ’3,561 Patent at 14:16–20 and FIG. 4. The patents describe various known call processing systems in the prior art and explain how the claimed system physically connects to various telecommunications systems such as Signal Transfer Points, switches, and Service Control Points. Flow charts in the specification show interfaces and connections, links to other devices and switches and operational control systems, and transfers of signals. It is noteworthy that Cox does not challenge the individual claim steps but concentrates on the overall reference to “processing system.”

The evidentiary record and the law lead to the conclusion that the claims were not proved invalid on the ground of indefiniteness.³ Although my colleagues today reach the correct result, their analytical path is not in accordance with law and should be rejected.

³ This appeal was taken under Rule 54(b), thus, no other issues are before the court, as to either validity or infringement.