

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

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**X2Y ATTENUATORS, LLC,**  
*Appellant,*

**v.**

**INTERNATIONAL TRADE COMMISSION,**  
*Appellee,*

**AND**

**INTEL CORPORATION, INTEL AMERICAS, INC.,  
COMPONENTES INTEL DE COSTA RICA S.A.,  
INTEL TECHNOLOGY SDN. BHD, INTEL  
PRODUCTS (CHENGDU) LTD., APPLE INC., AND  
HEWLETT-PACKARD COMPANY,**  
*Intervenors.*

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2013-1340

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Appeal from the United States International Trade  
Commission in Investigation No. 337-TA-781.

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Decided: July 7, 2014

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JOHN D. HAYNES, Alston & Bird LLP, of Atlanta,  
Georgia, argued for appellant. With him on the brief was  
PATRICK J. FLINN.

SIDNEY A. ROSENZWEIG, Attorney, Office of General Counsel, United States International Trade Commission, of Washington, DC, argued for appellee. With him on the brief were DOMINIC L. BIANCHI, General Counsel, and WAYNE W. HERRINGTON, Assistant General Counsel.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, of Boston, Massachusetts, argued for intervenors. With him on the brief were MICHAEL J. SUMMERSGILL, JOSEPH J. MUELLER, MARK C. FLEMING and LAUREN B. FLETCHER; JAMES L. QUARLES, III, and NINA S. TALLON, of Washington, DC; and MARK D. SELWYN, of Palo Alto, California. Of counsel on the brief for intervenor Apple Inc. were MARCIA H. SUNDEEN, Kenyon & Kenyon LLP, of Washington, DC, and MEGAN WHYMAN OLESEK, of Palo Alto, California.

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Before MOORE, REYNA, and WALLACH, *Circuit Judges*.

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

Concurring opinion filed by *Circuit Judge* REYNA.

MOORE, *Circuit Judge*.

X2Y Attenuators, LLC (X2Y) appeals from the final determination of the International Trade Commission (ITC) that Intel Corporation and other intervenors (Intel) did not violate 19 U.S.C. § 1337 because Intel's products were not covered by X2Y's asserted patents. Because the ITC correctly construed the relevant claim terms, we *affirm*.

#### BACKGROUND

The asserted patents, U.S. Patent Nos. 7,609,500 ('500 patent), 7,916,444 ('444 patent), and 8,023,241 ('241 patent) are familially related. The technology disclosed in the asserted patents relates to structures for reducing electromagnetic interference in electrical circuits. The

patented inventions use shielding electrodes to reduce the undesirable buildup of charge, known as “parasitic capacitance,” between electrodes used for conduction. ’444 patent Abstract, col. 2 ll. 36–40, col. 4 ll. 60–65, col. 9 ll. 5–40. In particular, the patents disclose alternating arrangements of shielded and shielding electrodes. ’500 patent Figs. 1A, 1B; see Intervenor’s Br. 19 (annotated by Intel and reproduced below); Appellant’s Br. 5 (annotated by X2Y and reproduced below).

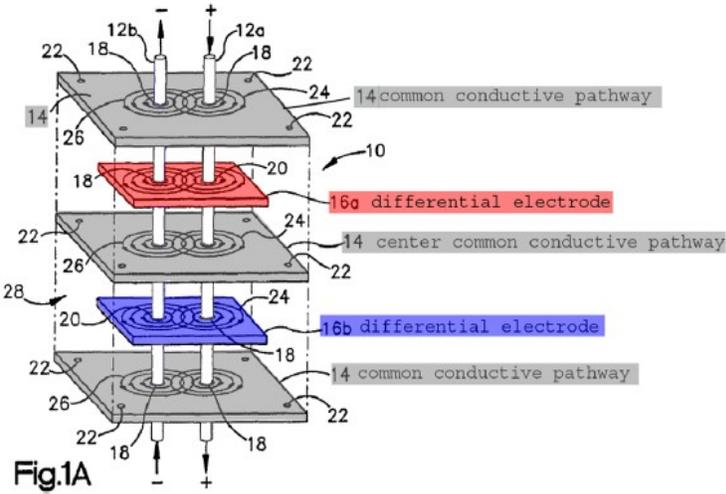


Fig.1A

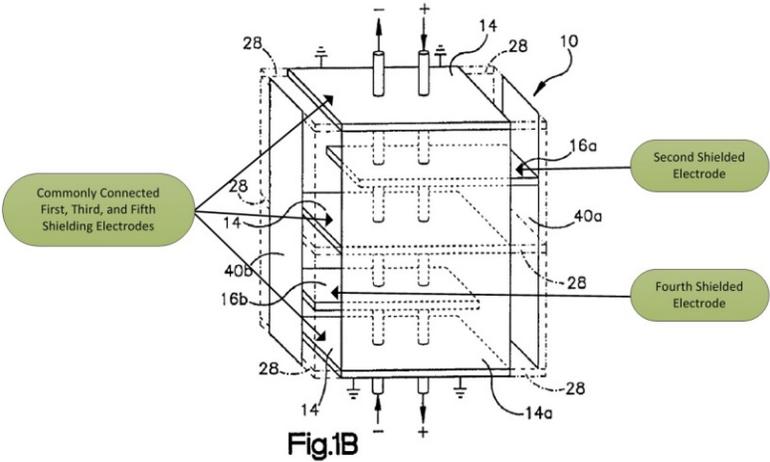


Fig.1B

Although it is not asserted, the parties treat claim 26 of the '444 patent as illustrative:

An arrangement for energy conditioning, comprising: . . .

a first electrode including a first shielding electrode portion, *a third electrode including a third shielding electrode portion*, and a fifth electrode including a fifth shielding electrode portion, wherein said first electrode, said third electrode and said fifth electrode are conductively coupled to one another;

a second electrode including a second shielded electrode portion; a fourth electrode including a fourth shielded electrode portion; wherein said second electrode and said fourth electrode are conductively isolated from each other; . . .

wherein said second shielded electrode portion and said fourth shielded electrode portion are in a first superposed alignment with each other; . . . *and wherein said second shielded electrode portion is physically shielded from said fourth shielded electrode portion by said third shielding electrode portion.*

'444 patent claim 26 (emphases added). At the ITC, the parties treated the '444 patent claim term "third electrode," '241 patent claim term "center electrode" (*see, e.g.*, '241 patent claim 14), '500 patent claim term "first ground plane," (*see, e.g.*, '500 patent claim 1), and several other claim terms collectively as "electrode terms" or "center ground plane terms." *See* J.A. 131–32 ("[E]ach of the asserted claims contains a term from a group that X2Y characterizes as the 'electrode' terms, and respondents characterize as 'central ground plane' terms.").

X2Y filed a complaint in the ITC accusing Intel of unlawful importation of certain microprocessor products. The parties disputed whether the electrode terms were limited to the so-called “sandwich” configuration—an arrangement of three electrodes in which a center conductor is flanked by paired differential, or oppositely charged, conductors. *See* ’500 patent col. 10 ll. 20–22 (describing “electrostatic suppression or minimization of parasitics originating from the sandwiched differential conductors”); ’444 patent col. 11 ll. 64–65 (describing “sandwiching pairs of electrically opposing complementary pathways”); *see also* ’500 patent col. 14 ll. 4–11 (“The various attachment schemes described herein will normally allow a ‘0’ voltage reference to develop with respect to each pair or plurality of paired differential conductors located on opposite sides of the shared central and common conductive pathway, and be equal yet opposite for each unit of a separated paired energy pathway or structure, between the centrally positioned interposing, common conductive shield pathway used.”). While Intel argued that the claims should be limited to the sandwich configuration, X2Y contended that the electrode terms require no construction and should be given their plain and ordinary meanings. *See* J.A. 139–44.

The ITC resolved the dispute in favor of Intel. It adopted the Administrative Law Judge’s construction of the electrode terms as requiring “a common conductive pathway electrode positioned between paired electromagnetically opposite conductors.” J.A. 36; *see* J.A. 131–34. This construction was based on specification disavowal—for example, the statement in the ’500 patent that the sandwich configuration is “an essential element among all embodiments or connotations of the invention,” ’500 patent col. 19 ll. 22–23, and a statement incorporated by reference into the ’444 patent that this configuration is a

“feature[] universal to all the embodiments,” U.S. Patent No. 5,909,350 (’350 patent) col. 20 l. 16.<sup>1</sup> Because X2Y conceded noninfringement on the basis of this construction, the ITC found no violation. X2Y appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(6).

#### DISCUSSION

We review *de novo* the ITC’s legal determinations, including those relating to claim interpretation. *Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n*, 383 F.3d 1352, 1360 (Fed. Cir. 2004) (citation omitted).

X2Y argues that the ITC erred in its construction of the electrode terms. X2Y contends that the ITC improperly read several functional and structural limitations into the meaning of the term “electrode.” It contends that the plain meaning of “electrode” denotes a single conductor rather than three conductors, let alone a three-conductor sandwich structure having paired electromagnetically opposite conductors flanking the central conductor. X2Y argues that claim 26 of the ’444 patent recites the physical role of each of the electrodes “separate and apart from any electrical characteristics . . . created when the arrangement is connected in a circuit.” Appellant’s Br. 27–28.

X2Y also argues that the specifications of the asserted patents contradict the constructions. X2Y contends that, for example, the ’444 patent discloses that the electrodes

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<sup>1</sup> The asserted ’444 patent is a continuation-in-part of the ’350 patent, and it incorporates the ’350 patent by reference. The ’444 patent also incorporates by reference U.S. Patent No. 6,738,249, which contains a passage referring to “an essential element among all embodiments or connotations of the invention” that is identical to that in the ’500 patent. ’249 patent, col. 19 ll. 20–22; *cf.* ’500 patent col. 19 ll. 22–23.

on either side of a center conductor may be “electrically null, electrically complementary, . . . or electrically opposite,” which, it argues, suggests that the claims should not be limited to “electrically opposite” conductors. ’444 patent col. 5 ll. 7–11. X2Y further contends that the ITC improperly relied on the alleged disclaimers in some of the priority patents because the asserted patents are only related to those patents as continuations-in-part.

Finally, X2Y argues that the statements relied upon by the ITC do not constitute disavowal of claim scope. X2Y argues that the ’500 patent’s reference to the “common conductive pathway electrode” as the “essential element among all embodiments” does not limit the claims because it says nothing about the electromagnetic state of the conductors surrounding it when the circuit is energized. It contends that a priority patent’s description of the sandwich configuration as “universal to all the embodiments” is also not a disclaimer because the passage that the ITC relied upon otherwise uses permissive rather than mandatory language. ’350 patent col 20 ll. 14–17, 36–41.

We conclude that the ITC correctly construed the electrode terms. The patents’ statements that the presence of a common conductive pathway electrode positioned between paired electromagnetically opposite conductors is “universal to all the embodiments” and is “an essential element among all embodiments or connotations of the invention” constitute clear and unmistakable disavowal of claim scope. *See GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 2014 WL 1704518, at \*2–3 (Fed. Cir. 2014). The standard for finding disavowal, while exacting, was met in this case. *Id.* at 2.

Specifically, we have held that labeling an embodiment or an element as “essential” may rise to the level of disavowal. *Id.* at 3. Here, not only does the specification state that the “center common conductive pathway elec-

trode” flanked by two differential conductors is “essential,” but it also spells out that it was an “essential element among *all embodiments or connotations of the invention.*” ’500 patent col. 19 ll. 22–23 (emphasis added); *see id.* Fig. 2; *id.* col. 18 l. 13, ll. 60–61; *id.* col. 19 ll. 24–25.

The ’350 patent’s statement that the sandwich configuration is a “feature[] universal to all the embodiments” reinforces this conclusion. ’350 patent col 20 l. 16. Like the “essential element” label, this phrase demonstrates a clear intention to limit the claim scope “using words or expressions of manifest exclusion or restriction.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002). The relevant passage does include the permissive language that “the material having predetermined electrical properties may be one of a number in any of the embodiments.” ’350 patent col. 20 ll. 17–19. But the specification further explains that “[n]o matter which material is used, the combination of common ground conductive plates and electrode conductive plates creates a plurality of capacitors to form a line-to-line differential coupling capacitor between and two line-to-ground decoupling capacitors from a pair of electrical conductors.” *Id.* col. 20 ll. 22–27 (emphasis added). Thus, although the passage states that the material may vary, it also explains that the general sandwich configuration remains the same because it is a “feature[] universal” to the invention. This is a clear and unmistakable disavowal of claim scope.

X2Y’s argument that some of the disclaimers are inapplicable because they appear only in priority patents to which the asserted patents are only related as continuations-in-part is without merit on the facts of this case. First, the “essential element” disavowal explicitly appears in one of the asserted patents, the ’500 patent. Second, the asserted ’500 and ’444 patents incorporate by reference the priority ’350 patent (which includes the “features

universal” disavowal), and the ’444 patent also incorporates by reference the ’249 patent (which includes the “essential element” disavowal). The incorporated patents are “effectively part of the host [patents] as if [they] were explicitly contained therein.”<sup>2</sup> *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (citations omitted); see *Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1069 (Fed. Cir. 1997) (citing Manual of Patent Examining Procedure § 608.01(p) (6th ed. 1996)) (explaining that, unless indicated otherwise, incorporation by reference of a patent renders “the entire contents” of that patent’s disclosure a part of the host patent)); see also *Harari v. Lee*, 656 F.3d 1331, 1335–36 (Fed. Cir. 2011). As a result, the disclaimers of the incorporated patents are a part of the asserted patents.

Of course, “incorporation by reference does not convert the invention of the incorporated patent into the invention of the host patent.” *Modine Mfg. Co. v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1553 (Fed. Cir. 1996). And it is certainly possible that a clear and unmistakable disavowal in an incorporated patent is no longer so when placed in the context of the disclosure of the host patent. This, however, is not that case. Although the ’444 patent mentions that, “[a]s used generally therein,” a conductive pathway could include electrode pairings that are “electrically null, electrically complementary, electrically differential, or electrically opposite,” ’444 patent col. 4 l. 66 – col. 5 l. 11, this teaching is not sufficient to blur the clear disavowals. The possibility that conductive pathways may include these structures is not inconsistent with the

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<sup>2</sup> The parties chose to treat the electrode terms across the three asserted patents as rising and falling together. See J.A. 131–32. Therefore, we do not separately address the ’241 patent.

patents' statements that, of all the conceivable configurations, the sandwich configuration is a "feature[] universal" and "an "essential element" of the inventions of the asserted patents. These disavowals therefore limit the scope of the claims of the '444 and '500 patents. We agree with the ITC that, in light of the clear disavowals, the claims at issue are limited to "a common conductive pathway electrode positioned between paired electromagnetically opposite conductors." Because X2Y conceded noninfringement based on this construction, we need not reach any other issues.

#### CONCLUSION

We *affirm* the ITC's determination of no violation of 19 U.S.C. § 1337.

**AFFIRMED**

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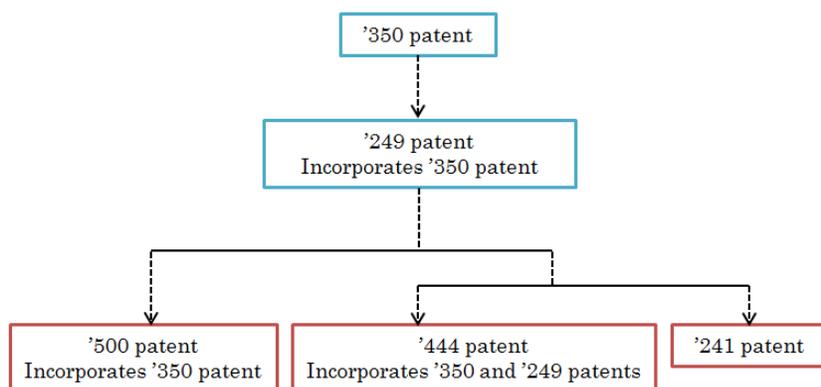
REYNA, *Circuit Judge*, concurring.

I join the court's opinion in its entirety. I write separately to address an error in the claim construction approach adopted by the ALJ and the Commission. The error, while significant, did not affect the result affirmed by this court.

Specifically, the ALJ and the Commission assumed a specific priority date that X2Y asserted as a defense to an invalidity challenge. The ALJ and the Commission then determined that the scope of the asserted claims was limited by “the invention” disclosed in earlier patents in the priority chain. This was error because the asserted claims derive from multiple continuation-in-part applications, and because the ALJ and the Commission failed to objectively construe the asserted claims before deciding whether the claims were entitled to priority.

### BACKGROUND

The asserted patents belong to an extensive family claiming priority to the '350 patent. The priority chain for each asserted patent contains multiple continuation-in-part applications, including the '249 patent:



The asserted patents incorporate by reference the disclosures of the '350 and '249 patents (“the earlier patents”) to varying degrees. The '500 patent incorporates by reference the '350 patent and shares a specification with the '249 patent. The '444 patent incorporates by reference the earlier patents but has a different specification. The '241 patent also has a different specification, and does not incorporate by reference either of the earlier patents.

Respondents argued below that X2Y's claims should be limited by the disclosures in the earlier patents. The ALJ agreed with Respondents:

Respondents' position has merit. It is well-settled that, for a claim to receive priority to an earlier application, the claimed invention must be disclosed in the earlier application. The claim is therefore *limited* to the invention disclosed in the earlier application. Accordingly, the terms of the claims asserted in this investigation will be construed with reference to the disclosures of the '350 and '249 patents.<sup>1</sup>

The ALJ therefore construed the "electrode" terms in view of certain disclaimers of scope in the earlier patents.

The Commission agreed with the ALJ's claim construction approach, explaining that statements of disavowal in the earlier patents should apply to the asserted claims because X2Y took the position that the claims "trace their priority through many generations of applications (including the '249 patent) all the way to the '350 patent."<sup>2</sup> The Commission apparently faulted X2Y for taking alternative positions as to priority:

X2Y chose to claim priority to its earlier patents, not only at the Patent and Trademark Office, but also in this investigation. As X2Y presented a case based upon priority to these earlier patents,

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<sup>1</sup> *Certain Microprocessors, Components Thereof, and Prods. Containing Same*, USITC Inv. No. 337-TA-781, Initial Determination at 44 (Jan. 16, 2013) (emphasis added) (internal citations omitted).

<sup>2</sup> *Certain Microprocessors, Components Thereof, and Prods. Containing Same*, USITC Inv. No. 337-TA-781, Comm'n Op. at 11 (Mar. 4, 2014).

it is not now at liberty to recast its patents in a different way.<sup>3</sup>

On this basis, the Commission affirmed the ALJ's claim construction of the "electrode" terms.

#### DISCUSSION

The claim construction approach affirmed by the Commission is erroneous for three reasons. First, it is well settled that a written description analysis depends on a proper claim construction because, among other reasons, a claim is entitled to the priority date of an earlier application only if the earlier specification provides sufficient written support for the full scope of the claim.<sup>4</sup> Where the claims have not been properly construed, the full scope of the claim is unknown, thereby rendering baseless any determination of written support in an earlier patent.<sup>5</sup> It follows that entitlement to priority cannot be decided without first construing the asserted claims. Similarly, it is improper to construe claims with the goal of arriving at a particular priority date, a measure that would violate a tribunal's "independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties."<sup>6</sup>

Second, it is improper to "hold" the patentee to a priority date that it asserted as a defense to an invalidity challenge without first construing the claims and resolv-

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<sup>3</sup> *Id.* at 12.

<sup>4</sup> *Anascope, Ltd. v. Nintendo of Am. Inc.*, 601 F.3d 1333, 1335 (Fed. Cir. 2010).

<sup>5</sup> *See, e.g., Intirtool, Ltd. v. Texar Corp.*, 369 F.3d 1289, 1296 (Fed. Cir. 2004); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1360 (Fed. Cir. 1998).

<sup>6</sup> *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995).

ing invalidity issues. To be clear, invalidity considerations may inform claim construction in limited circumstances, but they cannot dictate the process. In this case, all the invalidity defenses raised by Respondents (anticipation, obviousness, indefiniteness, lack of written description and improper inventorship) required that the claims be construed first. X2Y did not bear an initial burden of proving non-invalidity—including that the patent antedates alleged prior art—because all patents are presumed valid.<sup>7</sup> Instead, Respondents had the burden to show invalidity by clear and convincing evidence. Only after Respondents established a prima facie case of invalidity would the burden have shifted to X2Y to prove priority over the invalidating prior art.<sup>8</sup> Therefore, it was error for the ALJ and the Commission to assume a priority date before construing the claims and addressing the invalidity issues.

And third, it was erroneous to treat X2Y's attempt to overcome allegedly invalidating prior art through a priority claim as an attempt by X2Y to "recast" its patents.<sup>9</sup> X2Y had a right to advocate for a broad claim construction that might ultimately find no support in the earlier patents to which it claimed priority. Had the ALJ and the Commission first construed the asserted claims and then determined that they were not entitled to claim priority to the '350 or '249 patents, the asserted patents would have been entitled to either the priority date of other applications in their respective priority chains (as X2Y in fact argued) or the filing date of their respective applications.

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<sup>7</sup> 35 U.S.C. § 282.

<sup>8</sup> See *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305 (Fed. Cir. 2008).

<sup>9</sup> Comm'n Op. at 12.

Indeed, it is well established that “a patentee may argue in the alternative for different priority dates at trial.”<sup>10</sup>

Due to the foregoing errors, the ALJ and the Commission gave improper weight to statements regarding the scope of “the invention” contained in the earlier patents’ specifications. While the scope of claims may be limited by statements in the specification of the patent, it does not follow that claims in a continuation-in-part patent are necessarily limited by the specification of a patent to which the continuation-in-part claims priority. The disclosures of related patents may inform the construction of claim terms common across patents, but it is erroneous to assume that the scope of the invention is the same such that disclaimers of scope necessarily apply across patents, particularly when continuation-in-part applications are involved. A continuation-in-part application is the vehicle by which a patent applicant is allowed to add “new matter” to another pending application:

A continuation-in-part application is just what its name implies. It partly continues subject matter disclosed in a prior application, but adds new subject matter not disclosed in the prior application. Thus, some subject matter of a CIP application is necessarily different from the original subject matter.<sup>11</sup>

In other words, the invention claimed in a continuation-in-part application does not have to be limited to the invention disclosed in a priority patent. To the extent that a continuation-in-part application claims new matter, entitlement to priority is decided on a claim-by-claim

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<sup>10</sup> *Ajinomoto Co. v. Int’l Trade Comm’n*, 597 F.3d 1267, 1277 (Fed. Cir. 2010).

<sup>11</sup> *Univ. of W. Va., Bd. of Trs. v. VanVoorhies*, 278 F.3d 1288, 1297 (Fed. Cir. 2002).

basis, and various claims may be entitled to different priority dates.<sup>12</sup>

Although the path followed by the ALJ and the Commission was error, the construction they reached was correct because the disclaimer statements that informed the ALJ and the Commission's construction were incorporated explicitly or by reference in some of the asserted patents, and X2Y agreed to treat all "electrode" terms consistently across the asserted patents. Under the proper claim construction analysis, as outlined by this court's opinion, the relevant intrinsic record contains sufficient clear and unmistakable disavowal of claim scope to support the construction adopted by the ALJ and the Commission.

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<sup>12</sup> See, e.g., *Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1352, 1354 (Fed. Cir. 2012).