

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZTE (USA), INC.,
Petitioner,

v.

FRACTUS, S.A.,
Patent Owner.

Case IPR2018-01457
Patent 8,976,069 B2

Before PATRICK M. BOUCHER, KEVIN C. TROCK, and
JOHN A. HUDALLA,
Administrative Patent Judges.

TROCK, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

ZTE (USA) Inc. (“Petitioner”) filed a request for *inter partes* review of claims 1–3, 9, 15–17, 19–20, 24–25, 27–28, 30–36, 40, 46–48, 50–51, 55–56, 58–59, and 61–62 (the “challenged claims”) of U.S. Patent No. 8,976,069 B2 (Ex. 1001, “the ’069 patent”). Paper 2 (“Pet.”). FRACTUS S.A. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

Pursuant to 35 U.S.C. § 314, an *inter partes* review must not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). 35 U.S.C. § 325(d) also provides that, in determining whether to institute an *inter partes* review, the Director may take into account whether the same or substantially the same prior art or arguments were presented previously to the Office. Upon considering the evidence presented and the arguments made, we deny institution of an *inter partes* review for the reasons discussed below.

A. *Related Proceedings*

Petitioner advises that it has filed contemporaneously additional *inter partes* review (“IPR”) petitions on 6 patents that are based on the same specification as the ’069 patent, namely U.S. Patent Nos. 7,397,431 (IPR2018-01451); 7,394,432 (IPR2018-01455); 8,941,541 (IPR2018-01456); 9,054,421 (IPR2018-01461); 9,240,632 (IPR2018-01462); and 9,362,617 (IPR2018-01463). Pet. 1–2.

Petitioner also advises Patent Owner has alleged that Petitioner infringes these patents in *Fractus, S.A. v. ZTE Corporation, ZTE (USA)*,

Inc., and ZTE (TX), Inc., Civil Action No. 2:17-cv-00561-JRG, pending in the U.S. District Court for the Eastern District of Texas (the “Texas District Court Case”). *Id.* at 2. Patent Owner advises that this case has been transferred to the U.S. District Court for the Northern District of Texas. Prelim. Resp. 27.

Petitioner further advises that two other patents sharing the same specification as the ’069 patent (U.S. Patent Nos. 7,397,431 and 7,394,432), and several other patents claiming priority to the same specification, were the subject of a patent infringement lawsuit, *Fractus, S.A. v. Samsung et al.*, Civil Action No. 6:09-cv-00203-LED-JDL, filed in the U.S. District Court for the Eastern District of Texas in May of 2009. Pet. 2. Petitioner advises that litigation concluded in 2014, when the parties settled the case while an appeal was pending before the Federal Circuit. *Id.* Patent Owner identifies a Federal Circuit appeal involving the ’069 patent, or a parent, child, or sibling patent, *Fractus, S.A. v. Samsung Electronics Co.*, No. 12-1633. Paper 3, 4.

The parties further identify a number of related *inter partes* reexamination, *ex parte* reexamination, and *inter partes* review proceedings. Patent Owner concurs. Pet. at 2–4; Paper 3, 2–4.

B. The ’069 Patent

The ’069 patent is directed to antennae formed by sets of similar geometrical elements (polygons, polyhedrons) electro-magnetically coupled and grouped such that each of the basic elements which form the antenna structure may be distinguished in it. Ex. 1001, 1:44–48. Such “multilevel antennae” comprise a number of elements that may be distinguished in the overall structure. Because they show several levels of detail (that of the

overall structure and that of the individual elements which make it up), such antennae provide a multiband behavior and/or a small size. *Id.* at 2:61–65.

In such a multilevel structure, the area of contact or intersection between the majority of the elements forming the antenna is only a fraction of the perimeter or surrounding area of the polygons or polyhedrons. *Id.* at 3:19–22. In a multilevel structure at least 75% of its component elements have more than 50% of their perimeter (for polygons) not in contact with any of the other elements of the structure. *Id.* at 5:15–18. The number of frequency bands is proportional to the number of scales or sizes of the polygonal elements or similar sets in which they are grouped contained in the geometry of the main radiating element. *Id.* at 3:32–37.

Several multilevel structures may be grouped and coupled electromagnetically to each other to form higher level structures. *Id.* at 5:25–27. In a multilevel structure, all the component elements are polygons with the same number of sides or polyhedrons with the same number of faces. *Id.* at 5:27–30. “This property is broken when several multilevel structures of different natures are grouped and electromagnetically coupled to form meta-structures of a higher level.” *Id.* at 5:30–33.

Figure 1 from the '069 patent, shown below, depicts a multilevel antenna.

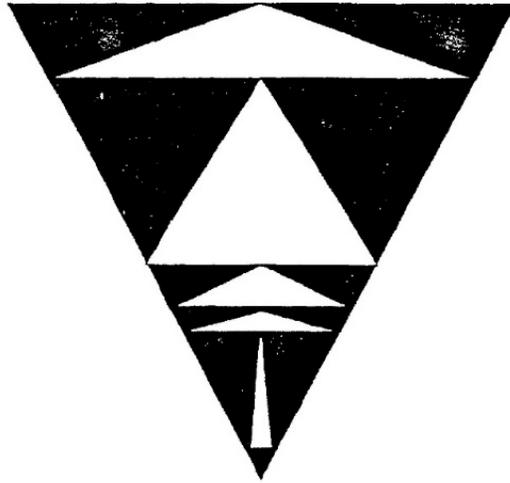


FIG. 1

Figure 1, above, shows a multilevel antenna formed of individual polygons of the same type (i.e., the black triangles). The triangles only overlap in a small area of their perimeter, in this case at their vertices. *Id.* at 5:36–40. The white triangles represent empty space.

The '069 patent notes that the unique geometry of the multilevel antennae allows for the possibility of simultaneous operation in several frequency bands in a similar manner (similar impedance and radiation diagrams) and the possibility of reducing their size compared to other conventional antennae based exclusively on a single polygon or polyhedron. *Id.* at 6:46–53.

C. Prior Art References and Asserted Grounds of Unpatentability

Petitioner relies on three prior art references and asserts three separate grounds against the challenged claims. The prior art references are:

(1) Misra et al., “Study of Impedance and Radiation Properties of a Concentric Microstrip Triangular-Ring Antenna and Its Modeling Techniques Using FDTD Method,” IEEE TRANSACTIONS ON ANTENNAS AND

PROPAGATIONS, Vol. 46, No. 4, April 1998 (“Misra I”) (Ex. 1003); and
(2) U.S Patent No. 6,133,879, issued Oct. 17, 2000 (“Grangeat”) (Ex. 1005).

Petitioner contends that the challenged claims are unpatentable on the following grounds:

Ground 1: Claims 1–3, 9, 15–17, 19–20, 24–25, 27–28, 30–36, 40, 46–48, 50–51, 55–56, 58–59, and 61–62 are unpatentable under pre-AIA 35 U.S.C. §103 based on Grangeat (Ex. 1005); and

Ground 2: Claims 1–3, 15–17, 27, 30–35, 46–48, 58, and 61–62 are unpatentable under pre-AIA 35 U.S.C. §103 based on Misra I (Ex. 1003).

II. DISCUSSION

As an initial matter, Patent Owner asserts that we should decline to institute *inter partes* review under 35 U.S.C. § 325(d) because the same or substantially the same prior art or arguments were presented previously to the U.S. Patent and Trademark Office (the “Office”) with respect to the ’069 patent. Prelim. Resp. 18–25. Patent Owner also asserts we should decline to institute review under 35 U.S.C. § 314(a), because this proceeding would be cumulative of a pending district court proceeding. *Id.* at 25–27. Although Petitioner addresses the prosecution history of the ’069 patent in the Petition (*see* Pet. 12), Petitioner did not seek leave to file a reply brief in order to respond directly to Patent Owner’s assertions under 35 U.S.C. § 325(d) or 35 U.S.C. § 314(a). We consider these threshold issues below.

A. 35 U.S.C. § 325(d)

35 U.S.C. § 325(d) provides that, in determining whether to institute an *inter partes* review proceeding, the Director may take into account whether, and reject the petition because, the same or substantially the same

prior art or arguments were presented previously to the Office. Thus, in exercising its discretion whether to institute trial, the Board considers whether the same or substantially the same prior art or arguments were presented previously. *See, e.g., Cultec, Inc. v. StormTech LLC*, Case IPR2017-00777 (PTAB Aug. 22, 2017) (Paper 7) (informative) (denying institution under 35 U.S.C. § 325(d) where the Office previously evaluated two asserted references during examination and additional relied-upon references were cumulative of prior art considered during examination); *Hospira, Inc. v. Genentech, Inc.*, Case IPR2017-00739 (PTAB July 27, 2017) (Paper 16) (informative) (denying institution under 35 U.S.C. § 325(d) where the Office previously considered and evaluated during examination the same arguments regarding a patent owner’s priority claim).

Whether to deny institution of trial on the basis of 35 U.S.C. § 325(d) is a fact-dependent decision, in which the Board balances the petitioner’s desire to be heard against the interest of the patent owner in avoiding duplicative challenges to its patent. The Board also takes into account the “efficient administration of the Office,” *see* 35 U.S.C. § 316(b), which may be affected by consideration of trial petitions that raise the same or substantially the same prior art or arguments presented previously to the Office during examination, a reexamination proceeding, a reissue proceeding, or in an earlier-filed petition requesting an IPR.

In evaluating whether to deny institution on the basis of 35 U.S.C. § 325(d), the Board has considered certain non-exclusive factors. *See Becton, Dickinson & Co. v. B. Braun Melsungen AG*, Case IPR2017-01586, slip op. at 17–18 (PTAB Dec. 15, 2017) (Paper 8) (informative). The *Becton Dickinson* non-exclusive factors include:

1. the similarities and material differences between the asserted art and the prior art involved during examination;
2. the cumulative nature of the asserted art and the prior art evaluated during examination;
3. the extent to which the asserted art was evaluated during examination;
4. the extent of the overlap between the arguments made during examination and the manner in which a petitioner relies on the prior art or a patent owner distinguishes the prior art;
5. whether a petitioner has pointed out sufficiently how the Office erred in evaluating the asserted prior art; and
6. the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Id.

In deciding whether to deny institution under 35 U.S.C. § 325(d), the Board may also consider materially changed circumstances or facts and evidence of which the Office was not aware during its previous consideration of the asserted art or arguments. *Kayak Software Corp. v. Int'l Bus. Machs. Corp.*, Case CBM2016-00075, slip op. at 10–12 (PTAB Dec. 15, 2016) (Paper 16) (informative). We consider these factors below.

1. *The similarities and material differences between the asserted art and the prior art involved during examination*

Patent Owner points out that the prior art asserted here, namely Misra I and Grangeat, “were considered by the Office during the initial examination of the ’069 Patent that resulted in allowance of the claims at issue in the present proceeding.” Prelim. Resp. 19.

We agree with Patent Owner that the references asserted here, Misra I and Grangeat, were among the references presented to the Office in the examination of the '069 patent. *See e.g.* Ex. 1001, 4, 21. Therefore, this factor weighs in favor of denying institution.

2. *The cumulative nature of the asserted art and the prior art evaluated during examination*

As noted above, the art presented by Petitioner here is some of the same art that was presented to the Office during examination of the '069 patent. *Id.* Therefore, this factor weighs in favor of denying institution.

3. *The extent to which the asserted art was evaluated during examination*

With regard to Misra I, Patent Owner asserts, “the examiner was provided with detailed explanations of how Misra I could be applied to the teachings of the specification of the '069 patent, through the documents submitted from *Inter Partes* Reexamination 95/001,482 (“IPX '1482”) and *Inter Partes* Reexamination 95/001,483 (“IPX '1483”).” Prelim. Resp. 20 (citing Ex. 1001, 14, 17, 27, 30 and 31 (citing documents from IPX '1482 and IPX '1483); *see also* Exs. 2002–2005).¹ Patent Owner asserts, “[t]hese documents include the requests for reexamination of related patents based upon Misra I, the order granting the reexaminations of the related patents based upon the teachings of Misra I, office actions rejecting the claims based

¹ Additional discussion of these proceedings may be found in *ZTE (USA) Inc. v. Fractus, S.A.*, Case IPR2018-01451, slip op. at 11–13 (PTAB Feb. 19, 2019) (Paper 12), and *ZTE (USA) Inc. v. Fractus, S.A.*, Case IPR2018-01455, slip op. at 11–13 (PTAB Feb. 19, 2019) (Paper 11).

upon Misra I, and detailed claim charts applying Misra I to the claims of the related patents.” *Id.*

As for Grangeat, Patent Owner asserts, “Grangeat was previously presented to the Office in *Inter Partes* Reexaminations 95/002,305 (“IPX ’2305”), 95/002,346 (“IPX ’2346”), 95/002,349 (“IPX ’2349”) and 95/002,332 (“IPX ’2332”) and Ex Parte Reexaminations 90/013,022 (“EPX ’3022”), 90/013,023 (“EPX ’3023”), 90/013,024 (“EPX ’3024”) and 90/013,025 (“EPX ’3025”), all of which were directed to related patents sharing the same specification as the ’069 Patent.” Prelim. Resp. 21 (citing Exs. 2036, 2008, 2011, 2035, 2031, 2030, 2029, and 2032).² Patent Owner also asserts, “in Reexamination No. 90/013,024 it was determined by the Office that “[t]here is no question of patentability raised by Grangeat which is new and different from that raised by Chiba in the ’1483 proceeding.” *Id.* (citing Ex. 2029, 17). Patent Owner asserts, “[t]he examiner for the ’069 Patent was provided with the Chiba reference (Ex. 1001 at 3) and detailed explanations for how Chiba applied to the teachings of the disclosure of the ’069 Patent in IPXs ’1482 and ’1483 (Ex. 1001 at 14, 17, 27, 30, and 31).” *Id.*

Similarly, Patent Owner asserts, “the Examiner in EPXs ’3022 and ’3025 determined that “[t]here is no question of patentability raised by Grangeat which is new and different from that raised by Korisch in the ’1390 proceeding.” *Id.* at 22 (citing Ex. 2023 at 15; *see also* Ex. 2022 at 15

² Additional discussion of EPX ’3023 may be found in *ZTE (USA) Inc. v. Fractus, S.A.*, Case IPR2018-01451, slip op. at 13 (PTAB Feb. 19, 2019) (Paper 12). Additional discussion of EPX ’3024 may be found in *ZTE (USA) Inc. v. Fractus, S.A.*, Case IPR2018-01455, slip op. at 13 (PTAB Feb. 19, 2019) (Paper 11).

("There does not appear to be anything, relevant to the claims, that is in Grangeat but is not in Korisch."). Patent Owner asserts "the examiner for the '069 Patent was provided with the Korisch reference (Ex. 1001 at 3) and detailed explanations for how Korisch applied to the teaching of the disclosure of the '069 Patent in *Inter Partes* Reexaminations 95/001,390 ("IPX '1390") and 95/001,501 ("IPX '1501")." *Id.* (citing Ex. 1001 at 15–17, 27, 30, 3; *see also* Exs. 2033, 2034).

We recognize that these reexamination proceedings involve different patents with different claims. It is, however, significant that the specification of the '069 patent is substantially the same as the specification of the patents in the reexamination proceedings. *See* Pet. 2 ("The '069 patent was also related to the following PTO proceedings on patents issued from the same specification."). Moreover, as Patent Owner asserts,

the same examiner that allowed the claims of the '069 Patent was provided with the Misra I and Grangeat references, and was also provided with detailed explanations for how teachings of the references were applied to the disclosure of the '069 Patent. With regard to Misra I, the application of the references to the '069 Patent disclosure was provided through reexamination requests and detailed claim charts applying Misra I against claims drawn from the same disclosure as the '069 Patent. With regard to Grangeat, the examiner was provided with reexamination requests and detailed claim charts outlining how two references (Chiba and Korisch), both of which were deemed cumulative to Grangeat, were applied against claims drawn from the same disclosure as the '069 Patent.

Prelim. Resp. 23.

In light of these considerations, we are persuaded this factor weighs in favor of denying institution.

4. *The extent of the overlap between the arguments made during examination and the manner in which a petitioner relies on the prior art or a patent owner distinguishes the prior art*

Patent Owner asserts, “[i]n the various reexamination documents that were presented to the examiner during examination, the respective requesters attempted to characterize Misra I, Grangeat, Chiba and Korisch as multilevel structures, as opposed to the groups of single-band antennas actually described in the references. This is the same argument employed by Petitioner in the present proceeding.” Prelim. Resp. 24.

Indeed, in the Request for *Inter Partes* Reexamination of U.S. Patent 7,397,431 (IPX ’2346), the Requestor argues, “Grangeat discloses a multifrequency microstrip antenna that enables two resonances to be established in two respective different areas. Specifically, ‘[t]he antenna of the example is a dual-frequency antenna, i.e. it must give rise to at least two resonances so that it can operate in two modes corresponding to two operating frequencies.’” Ex. 2008, 16. Here, Petitioner similarly argues, “Grangeat discloses a ‘multifrequency microstrip antenna’ for ‘portable telephones.’ Grangeat describes a variety of structures that can operate at multiple frequency bands . . . (describing a microstrip antenna that operates at two frequency bands).” Pet. 12 (internal citations omitted).

In IPX ’2346, the Requestor also argues, “Grangeat further discloses . . . a conductive radiating element includes at least one multilevel structure, and the at least one multilevel structure comprising a plurality of electromagnetically coupled geometric elements.” Ex. 2008, 17. Here, Petitioner makes a similar argument, “[t]he multilevel structure of Grangeat is made up of electromagnetically coupled geometric elements.” Pet. 14.

Because the arguments presented here are similar to arguments presented previously to the Office, this factor weighs in favor of denying institution.

5. Whether a petitioner has pointed out sufficiently how the Office erred in evaluating the asserted prior art

Here, Patent Owner argues, “Petitioner made no effort to explain how the Office erred in its previous evaluation of the prior art. For example, Petitioner made no attempt to show that the Office erred in determining that Grangeat was cumulative of Chiba and Korisch. Furthermore, Petitioner made no attempt to show that the characterizations of Misra I in IPXs ’1482 and ’1483 was incorrect.” Prelim. Resp. 24.

We are unable to find any discussion in the Petition pointing out how the Office erred in evaluating the asserted prior art. Accordingly, this factor weighs in favor of denying institution.

6. The extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments

Patent Owner argues, “[w]hile Petitioner has presented current density plots, return loss graphs, VSWR graphs and radiation pattern plots for Misra I and Grangeat that were not before the examiner during examination, there is strong reason to question the validity and consistency of this new evidence.” Prelim. Resp. 25. Patent Owner argues that to the extent there is any new evidence presented with regard to Misra I and Grangeat, it is of little probative value. *Id.*

Because Patent Owner concedes that “Petitioner has presented current density plots, return loss graphs, VSWR graphs and radiation pattern plots for Misra I and Grangeat that were not before the examiner during

examination,” this factor weighs in favor of granting institution.

7. Conclusion on Becton Dickinson factors

Of the six *Becton Dickinson* factors considered, five weigh in favor of denying institution and one weighs in favor of granting institution. The circumstances of this case are similar in certain respects to those in *Cultec, Inc. v. StormTech LLC*, Case IPR2017-00777 (PTAB Aug. 22, 2017) (Paper 7) (informative). In *Cultec*, institution was denied under 35 U.S.C. § 325(d) because the Office had previously evaluated two asserted references during examination and additional relied-upon references were cumulative of prior art considered during examination.

Here, there is little doubt that the Office was presented previously with Misra I and Grangeat, along with arguments and claim charts, substantively applying the references to claims at issue in the reexamination proceedings. *See, e.g.*, Ex. 1001 at 14, 17, 27, 30 and 31 (citing documents from IPX '1482 and IPX '1483); Ex. 2002, 57–116 (claim charts applying Misra I under sections 102/103 in IPX '1482); Ex. 2003 (order granting reexamination request in IPX '1482); Ex. 2008, 16–20, 32–38 (applying Grangeat under section 102 in IPX '2346); Ex. 2011, 16–20, 33–38 (applying Grangeat under section 102 in IPX '2349).

The manner, however, in which these references are now being presented, is slightly different, in that Misra I and Grangeat are each being presented under section 103 to support a single-reference obviousness challenge. In addition, evidence relating to the particulars of the antenna characteristics of Misra I and Grangeat is now being presented, where it apparently was not before. Nonetheless, when considered as a whole, we are persuaded that the *Becton Dickinson* factors weigh in favor of denying

institution.

B. 35 U.S.C. § 314(a)

The Director has discretion whether to institute an *inter partes* review under 35 U.S.C. § 314(a). *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016); *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at § II.B.4.i (Sept. 6, 2017) (precedential as to section II.B.4.i). That discretion has been delegated to the Board. *See* 37 C.F.R. § 42.4(a). The Board in *General Plastic* noted that when “exercising discretion under 35 U.S.C. § 314(a) . . . we are mindful of the goals of the AIA.” *Id.* The Board also noted, “[a]lthough we recognize that an objective of the AIA is to provide an effective and efficient alternative to district court litigation, we also recognize the potential for abuse of the review process by repeated attacks on patents.” *Id.*

Here, Patent Owner argues that the Texas District Court Case is nearing its final stages and will likely go to trial before a final decision is reached in this proceeding. Prelim. Resp. 27. Patent Owner argues that Petitioner delayed filing its Petition in this proceeding until the Texas District Court Case was nearing its final stages, only a few days before the statutory deadline for filing the Petition. *Id.* Patent Owner also argues the prior art, arguments, and expert testimony are the same in both proceedings, and any *inter partes* review will apply the same analysis³ and will likely take a longer time to do so. *Id.* at 26. Patent Owner asserts Petitioner's expert in the Texas District Court Case, Dr. Bartone, is the same expert providing a

³ Patent Owner filed previously a motion for district-court type claim construction in this proceeding, which we granted. Paper 9.

declaration in this proceeding, and that Dr. Bartone's invalidity report in the Texas District Court Case is substantively identical to the expert declaration here. *Compare, e.g.,* Ex. 1002, 97–132, *with* Ex. 2018, 80–100.

It is also worthwhile to note that a claim construction Memorandum Opinion and Order has been issued in the Texas District Court Case, which covers many of the claim terms for which Petitioner has proposed constructions in this proceeding. *Compare* Ex. 2016, 8–55, *with* Pet. 17–20. Patent Owner argues that institution of *inter partes* review under these circumstances would be contrary to the goal of the AIA to provide an efficient alternative to district court litigation. Prelim. Resp. 26.

We are persuaded that granting institution would have the Board consider the same prior art and essentially identical evidence and arguments already under consideration in the Texas District Court Case. Given these circumstances, our discretion under 35 U.S.C. § 314(a) falls in favor of denying institution.

III. CONCLUSION

For the foregoing reasons, we conclude that the same or substantially the same prior art or arguments presented in the Petition were presented previously to the Office during reexamination proceedings of closely related patents. In addition, the Texas District Court Case between the parties contesting the validity of the '069 patent claims appears likely to conclude before the completion of an *inter partes* review of the contested claims. Therefore, we exercise our discretion under 35 U.S.C. § 325(d) and 35 U.S.C. § 314(a) and do not institute an *inter partes* review of the '069 patent.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied* as to all challenged claims of the '069 patent and no trial is instituted.

IPR2018-01457
Patent 8,976,069 B2

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