

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

5

combinations of Vornefeld, Ahy,³ Andersson,⁴ and Newman.⁵ During the proceedings, patent owner General Access Solutions (GAS) conceded the unpatentability of independent claims 1, 10, and 19, thereby shifting the focus of the Board's unpatentability analysis to claims 2, 11, and 20. Following oral argument, the Board authorized supplemental briefing on the construction of the term "beam map" as recited in claims 2, 11, and 20.

Beyond accepting GAS's surrender of claims 1, 10, and 19, the Board declined to hold any of the other challenged claims unpatentable in its final written decision. *See Sprint Spectrum L.P. v. Gen. Access Sols., Ltd.*, No. IPR2017-01889, 2019 WL 1096544, at *13 (P.T.A.B. Mar. 7, 2019) (*Decision*). Applying the broadest reasonable interpretation standard, the Board first construed the term "a first beam map" as "scheduling information for one or more beams." *Id.* at *5. The Board then construed the phrase "a first beam map containing scanning beam information usable by said wireless access devices to detect said directed scanning beam signals," recited in claims 2, 11, and 20,⁶ as "scheduling information for one or more beams

³ U.S. Patent No. 7,366,133. We recognize, as the Board did, that the first named inventor's surname is Majidi-Ahy. We use the shorthand "Ahy" for consistency with the Board's decision.

⁴ U.S. Patent No. 6,470,177.

⁵ U.S. Patent No. 5,684,491.

⁶ The language of claim 20 varies slightly from claims 2 and 11, reciting "a first beam map containing scanning beam information usable by said wireless access devices to *receive* said *first* directed scanning beam signal." '931 patent col. 32 ll. 35–39 (emphases added). Neither the Board nor the parties identified any effect of this slight variation, so we do not analyze claim 20 separately for the purpose of our review.

that provides data indicating which scanning beam is used at which time.” *Id.* at *4–6. The Board held that the asserted prior art did not disclose the “scanning beam information” limitation of claims 2, 11, and 20 under its construction. *See id.* at *8–9, *11–13. In analyzing these claims, the Board declined to consider certain argument and evidence presented in Sprint’s reply. *Id.* at *12 n.6. The Board separately found that the asserted prior art did not disclose the limitations of claims 28 and 29. *Id.* at *10, *13.

Sprint challenges these determinations on appeal. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

I

Sprint first challenges the Board’s construction of the “scanning beam information” limitation in claims 2, 11, and 20. We review de novo the Board’s ultimate claim construction and any supporting determinations based on intrinsic evidence. *Personalized Media Commc’ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1339 (Fed. Cir. 2020) (citing *Knowles Elecs. LLC v. Cirrus Logic, Inc.*, 883 F.3d 1358, 1361–62 (Fed. Cir. 2018)). We review any subsidiary factual findings involving extrinsic evidence for substantial evidence. *Id.*

The broadest reasonable interpretation standard applies to this IPR proceeding.⁷ “Under a broadest

⁷ Per recent regulation, the Board applies the *Phillips* claim construction standard to IPR petitions filed on or after November 13, 2018. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (codified at 37 C.F.R. § 42.100(b)). Because Sprint filed its IPR petition before

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

7

reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.” *Tri-vascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016) (citing *Straight Path IP Grp., Inc. v. Sipnet EU S.R.O.*, 806 F.3d 1356, 1362 (Fed. Cir. 2015)). “While the broadest reasonable interpretation standard is broad, it does not give the Board an unfettered license to interpret the words in a claim without regard for the full claim language and the written description.” *Id.* (first citing *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010); then citing *In re Abbott Diabetes Care, Inc.*, 696 F.3d 1142, 1148–50 (Fed. Cir. 2012)). Indeed, the broadest reasonable interpretation must take into account “the context of the entire patent.” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1374 (Fed. Cir. 2019) (emphasis added) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc)).

The Board interpreted the claim term “scanning beam information usable by said wireless access devices to detect said directed scanning beam signals” as “data indicating which scanning beam is used at which time.”⁸ *Decision*, 2019 WL 1096544, at *5–6. For the following reasons, we agree with Sprint that the Board’s construction is not the broadest reasonable interpretation in view of the context of the entire ’931 patent.

To start, the Board’s construction is narrower than the plain claim language, which merely requires that the

November 13, 2018, we apply the broadest reasonable interpretation standard.

⁸ We focus on the “scanning beam information” portion of the claim because the construction of the “first beam map” portion of the claim is not in dispute. In construing “first beam map,” the Board adopted Sprint’s proffered construction. *Decision*, 2019 WL 1096544, at *5.

scanning beam information can be used “to detect” directed scanning beam signals. Moreover, claims 4 and 5, which depend from claim 3, which in turn depends from claim 2, recite examples of the “scanning beam information” of claim 2 that would fall outside of the Board’s narrow construction. “Under the doctrine of claim differentiation, dependent claims are presumed to be of narrower scope than the independent claims from which they depend.” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1242 (Fed. Cir. 2003) (first citing *RF Del., Inc. v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1264 (Fed. Cir. 2003); then citing 35 U.S.C. § 112, ¶ 4 (2000)). The Board’s construction would require the dependent claims to broaden “said scanning beam information” rather than narrow it. Claim 4, in particular, recites “wherein said scanning beam information identifies at least one modulation format,” while claim 5 recites “wherein said scanning beam information identifies at least one forward error correction code level.” ’931 patent col. 30 l. 62 – col. 31 l. 2. The reference to “said” scanning beam information means that the particular “scanning beam information” identified in claim 2—i.e., “usable by said wireless access devices to detect said directed scanning beam signals”—must further “identif[y] at least one modulation format” (claim 4) or “identif[y] at least one forward error correction code level” (claim 5). The “modulation format” and “forward error correction code level” for a directed scanning beam do not identify “which scanning beam is used at which time”—yet they are types of information that can be used to *detect* a directed signal, which is all that the plain language of claim 2 requires. While we acknowledge that dependent claims are “only an aid to interpretation and are not conclusive,” *Regents of Univ. of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1375 (Fed. Cir. 2008) (quoting *N. Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1577 (Fed. Cir. 1993)), the incompatibility of these dependent claims counsels against adopting the Board’s narrowing construction—especially

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

9

here, where the broadest reasonable interpretation standard applies.

The specification of the '931 patent similarly counsels against the Board's narrowing construction. The Board reasoned that the specification "consistently describes" the beam map as indicating "which scanning beam is used at which time." *Decision*, 2019 WL 1096544, at *6 (citing '931 patent col. 29 ll. 34–36, col. 29 ll. 51–55, col. 29 l. 66 – col. 30 l. 2). The three passages cited by the Board describe only a single embodiment, however, illustrated by Figure 14. As we have explained, the scope of an invention may only be properly limited to the preferred embodiment "if the patentee uses words that manifest a clear intention to restrict the scope of the claims to that embodiment." *Info-Hold, Inc. v. Applied Media Techs. Corp.*, 783 F.3d 1262, 1267 (Fed. Cir. 2015) (citing *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)).

The Board identified no manifestation of a clear intention to restrict the scope of the claims to the embodiment illustrated by Figure 14. In support of its construction, the Board relied heavily on a sentence in the specification that states:

The Broadcast Beam Maps provide data indicating which scanning beam (or beams) are used at which time (measured in symbols or other baud-oriented time unit) for the frame.

'931 patent col. 29 ll. 34–36. This sentence is not definitional and should not be read into the broader claim language that the patent applicant chose to use in claims 2, 11, and 20, particularly under the broadest reasonable interpretation standard. This sentence is also within the description of Figure 14, which the specification describes as just "one embodiment of the present invention." *Id.* at col. 29 ll. 3–5. And the same section of the specification also states that beam maps more broadly "comprise . . . information that defines scanning beams that cover the

sector.” *Id.* at col. 29 ll. 51–53. Elsewhere, the specification expressly states that its figures and embodiments “are by way of illustration only and should not be construed in any way to limit the scope of the invention.” *Id.* at col. 11 ll. 47–51. At bottom, there is no clear manifestation (nor did the Board identify one) that would allow the Board to limit the broad words “scanning beam information usable by said wireless access devices to detect said scanning beam signals” to an embodiment that provides “data indicating which scanning beam is used at which time.”

The Summary of the Invention section repeats the limitations of the various dependent claims. *See id.* at col. 9 ll. 35–52. It states that in “one embodiment,” the “scanning beam information [is] usable by the at least one wireless access device to detect the [at] least one directed scanning beam,” and in “another embodiment” the “scanning beam information identifies a downlink time slot.” *Id.* at col. 9 ll. 35–44. In “still another embodiment,” the “scanning beam information identifies at least one modulation format associated with the at least one directed scanning beam,” and in “yet another embodiment,” the “scanning beam information identifies at least one forward error correction code level associated with the at least one directed scanning beam.” *Id.* at col. 9 ll. 45–52. All of these different options for the “scanning beam information” support an interpretation broader than the Board’s construction, given the interrelationship of claims 2–5.

In addressing this section of the specification, the Board relied on the specification’s use of the phrase “another embodiment” to reason that the “downlink time slot” of claim 3 “is different than the information usable to detect directed scanning beam signals” recited in claim 2. *Decision*, 2019 WL 1096544, at *6 (citing ’931 patent col. 9 ll. 35–44). That reasoning does not withstand scrutiny. While the Summary of the Invention does characterize each additional piece of information as “another embodiment” or similar, the specification does not describe these

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

11

embodiments as separate and distinct, or mutually exclusive. Nor does it preclude a broad interpretation of claim 2's "scanning beam information." As explained above, the structure of the corresponding dependent claims indicates that the types of information recited in claims 3, 4, and 5 are examples of "*said* scanning beam information"—i.e., the *same* scanning beam information recited in claim 2 that is "usable . . . to detect said directed scanning beam signals."

Finally, the specification expressly contemplates an embodiment where "only one beam is active" for a given frame. '931 patent col. 28 ll. 61–63. The Board's construction for "first beam map" likewise requires providing "scheduling information for *one* or more beams." *Decision*, 2019 WL 1096544, at *5 (emphasis added). The broadest reasonable construction of the "scanning beam information" limitation, then, should accommodate an embodiment where only one beam is active for the duration of a frame. *See GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1311 (Fed. Cir. 2014) ("[W]here claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary." (second alteration in original) (quoting *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008))). The Board's construction is thus too narrow because it requires identifying "which scanning beam is used *at which time*" for each frame—a superfluous requirement for an embodiment where only one beam is active for each frame.

We conclude that the Board erred in its overly narrow construction of the "scanning beam information" limitations in claims 2, 11, and 20. Absent any lexicography or manifestation of clear intent to limit the scope of "scanning beam information" to any particular embodiment, the plain language must control. Accordingly, the recited "scanning beam information" must be broad enough to include *any* information that is "usable by said wireless access devices

to detect said directed scanning beam signals.” *E.g.*, ’931 patent col. 30 ll. 55–57. Certainly, that can include “data indicating which scanning beam is used at which time,” as recited in the Board’s construction. But the broadest reasonable interpretation of “scanning beam information” is not limited to that kind of data, nor must it include that kind of data. Consistent with the claims and specification, it could instead include the identification of “a downlink time slot,” a “modulation format,” a “forward error correction code level,” or any other kind of “information usable by said wireless access devices to detect said directed scanning beam signals” as recited in the claim. *See id.* at col. 9 ll. 35–52, col. 30 l. 53 – col. 31 l. 2.

Because the Board did not apply the broadest reasonable interpretation of “scanning beam information,” we vacate its unpatentability determinations as to claims 2, 11, and 20 and the claims that depend therefrom. We remand to the Board for an analysis of the unpatentability grounds under the proper construction.

II

Next, Sprint challenges the Board’s refusal to consider its reply arguments regarding the disclosure of the asserted Ahy prior art. In the final written decision, the Board objected to Sprint’s identification of Ahy’s “antenna selection parameter” as disclosing the limitations of claims 2, 11, and 20. The Board explained that Sprint’s arguments were “new assertions because they raise[d] a new issue and exceed[ed] the scope of a proper reply.” *Decision*, 2019 WL 1096544, at *12 n.6 (first citing 37 C.F.R. § 42.23(b); then citing Office Practice Trial Guide, 77 Fed. Reg. 48,765, 48,767 (Aug. 14, 2012)). Sprint insists that its reply arguments “simply expanded upon [the arguments in its petition] in response to a claim construction argument raised by GAS in its Response.” Appellant’s Br. 43.

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

13

We conclude that Sprint's scope of reply challenge is rendered moot by the Board's separate determination that Sprint failed to sufficiently establish a reason to combine the prior art references at issue: Newman and Ahy. *See Decision*, 2019 WL 1096544, at *13. Whether there is a reason to combine is a factual determination that we review for substantial evidence. *Rambus Inc. v. Rea*, 731 F.3d 1248, 1251–52 (Fed. Cir. 2013). The Board's finding is supported by substantial evidence because a reasonable factfinder could find no reason to combine based on the limited argument and evidence presented by Sprint. The portion of Sprint's petition addressing claim 2 merely refers back to an earlier analysis for claim element 1[a], as does the supporting expert declaration. We agree with the Board that Sprint's reason to combine analysis for claim element 1[a]—a different claim limitation covering different subject matter—is “insufficient to explain why one of ordinary skill would have incorporated Ahy's disclosure of [certain parameters relevant to claim 2] into Newman.” *Decision*, 2019 WL 1096544, at *13. Sprint complains that the Board overlooked certain pages of its petition, but the pages that Sprint identifies on appeal—which address claim element 1[c]—are not the pages that Sprint identified to the Board. We can hardly fault the Board for focusing on the pages that Sprint actually referenced in its petition.

Even if the Board had considered Sprint's reply arguments and evidence, nothing in the excluded portion of Sprint's reply addresses the reason to combine Newman and Ahy. Thus, the Board's finding of no reason to combine precludes a finding of obviousness regardless of whether Sprint's reply arguments were proper. Accordingly, we affirm the Board's finding of no reason to combine and hold Sprint's scope of reply challenge moot.

III

Finally, Sprint challenges the Board's separate determination as to claims 28 and 29 of the '931 patent. Sprint does not dispute the Board's interpretation of claims 28 and 29, focusing instead on the Board's reading of the Vornefeld prior art reference. Specifically, Sprint insists that the only reasonable understanding of Vornefeld's Figure 3 is that it discloses a single frame covering a fixed unit of time. The Board rejected Sprint's view, finding instead that Figure 3 of Vornefeld discloses *multiple* spatially separated frames that are simultaneously transmitted in parallel—not a *single* frame with “second downlink data traffic,” as required by claims 28 and 29.

We review the Board's findings regarding the scope and content of the prior art for substantial evidence. *Rambus*, 731 F.3d at 1251–52. “If two ‘inconsistent conclusions may reasonably be drawn from the evidence in record, [the PTAB]’s decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence.” *Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1356 (Fed. Cir. 2018) (alteration in original) (quoting *In re Cree, Inc.*, 818 F.3d 694, 701 (Fed. Cir. 2016)). When presented with the figure and accompanying discussion in Vornefeld, a reasonable factfinder could conclude, as the Board did, that the depicted transmissions comprise separate frames transmitted in parallel. Figure 3 identifies two axes: a time domain and a spatial domain. The depiction of components in parallel in the spatial domain could illustrate to an ordinarily skilled artisan that multiple frames are sent simultaneously to different locations in three-dimensional space. Indeed, the Board observed that the text accompanying Figure 3 describes “*concurrent* transmission of [medium access control protocol data units] in the spatial domain.” *Decision*, 2019 WL 1096544, at *10 (emphasis added) (citing J.A. 1003). In the context of Figure 3, Vornefeld also discusses a “[s]imultaneous downlink

SPRINT SPECTRUM L.P. v. GEN. ACCESS SOLS., LTD.

15

transmission” that “enables the base station to *send different information to several locations* in the same time and frequency slot.” J.A. 1004 (emphases added). Vornefeld additionally discusses “[c]oncurrent transmission of [mobile terminals] in one slot” if “spatial filtering” is performed. *Id.* (emphasis added). These disclosures support the Board’s interpretation of Figure 3 as one in which the parallel lines represent spatially separated frames sent simultaneously—not components of one large frame, as Sprint proposes.

Because the Board’s understanding of Figure 3 of Vornefeld is reasonable in view of these disclosures, it is supported by substantial evidence. We therefore affirm the Board’s determination as to claims 28 and 29.

CONCLUSION

We have considered the parties’ remaining arguments, and we do not find them persuasive. For the foregoing reasons, we vacate the Board’s final written decision with regard to claims 2–9, 11–18, and 20–27 of the ’931 patent and remand for further proceedings consistent with this opinion.⁹ We affirm the Board’s decision in all other respects.

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED

COSTS

No costs.

⁹ Because we affirm the Board’s finding of no reason to combine Newman and Ahy, on remand the Board need not address the asserted combination of Newman, Ahy, and Andersson (Ground V) notwithstanding our vacatur and remand on the claim construction issue.

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

SPRINT SPECTRUM L.P.,
Appellant

v.

GENERAL ACCESS SOLUTIONS, LTD.,
Appellee

2019-1855

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2017-
01889.

JUDGMENT

THIS CAUSE having been considered, it is

ORDERED AND ADJUDGED:

**AFFIRMED-IN-PART, VACATED-IN-PART, AND
REMANDED**

ENTERED BY ORDER OF THE COURT

May 13, 2020

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

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

SPRINT SPECTRUM L.P.,
Appellant

v.

GENERAL ACCESS SOLUTIONS, LTD.,
Appellee

2019-1855

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2017-
01889.

MANDATE

In accordance with the judgment of this Court, entered
May 13, 2020, and pursuant to Rule 41 of the Federal Rules
of Appellate Procedure, the formal mandate is hereby
issued.

FOR THE COURT

June 19, 2020

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/948,059	09/05/2001	Paul F. Struhsaker	9030101.147-US1

CONFIRMATION NO. 5591

POA ACCEPTANCE LETTER



OC000000123955550

164543
Haley Guiliano LLP (GAS)
75 Broad Street
Suite 1000
NEW YORK, NY 10004-3226

Date Mailed: 03/10/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2019.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/dtdinh/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/948,059	09/05/2001	Paul F. Struhsaker	9030101.147-US1

CONFIRMATION NO. 5591

POWER OF ATTORNEY NOTICE

70763
Byrne Poh LLP
11 Broadway, Ste 760
New York, NY 10004



Date Mailed: 03/10/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2019.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/dtdinh/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

Patentees : Paul F. Struhsaker
Patent No. : 7,230,931
Issued : June 12, 2007
Application No. : 09/948,059 Confirmation No.: 5591
Filed : September 5, 2001
For : WIRELESS ACCESS SYSTEM USING SELECTIVELY
ADAPTABLE BEAM FORMING IN TDD FRAMES
AND METHOD OF OPERATION

New York, New York 10004
May 5, 2021

Mail Stop PETITION
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PETITION UNDER 37 C.F.R. § 1.182
FOR DUPLICATE ORIGINAL PATENT

Sir:

Patentees and assignee hereby petition under 37 C.F.R. § 1.182 for issuance of a duplicate original ribbon copy of the above-identified patent.

1. The above-identified patent was issued on June 12, 2007. However, the original ribbon copy appears to have been lost or misplaced soon thereafter, as follows:

2. The assignee, the undersigned's client, reports that it does not have the original ribbon copy or any record of ever having received the original ribbon copy. Prior counsel has been contacted and has provided no indication that it has the original ribbon copy or any record of ever having received the original ribbon copy. The undersigned's law firm has no record of ever having received the original ribbon copy.

3. The undersigned was appointed as counsel on or about September 25, 2019 with the filing of a Power of Attorney Document. It is the practice of the undersigned's

law firm to store documents, including original patents, received via mail from the U.S. Patent and Trademark Office. Only upon request, it is the practice of the undersigned's law firm's to include a cover letter whenever forwarding an original patent to a client. It is further a practice of the law firm to keep an image copy of the signed cover letter in the law firm's electronic files. No such records exist.

4. The undersigned has contacted prior counsel who represented the assignee on or around June 12, 2007, the day the above-identified patent was issued. No indication was provided by prior counsel that they have the original ribbon copy or any record of ever having received the original ribbon copy

5. From the foregoing, it may be concluded that either the original ribbon copy of the above-identified patent was sent to the assignee and lost or misplaced by the assignee, or the original ribbon copy of the above-identified patent was never sent to the assignee and was lost or misplaced by prior counsel.

Therefore, patentees and assignee respectfully request that the Patent and Trademark Office issue a duplicate original patent. \$420.00, in payment of the fee set forth in 37 C.F.R. § 1.17(f), is being paid during electronic submission of this Petition. The Director is hereby authorized to charge any additional fee that may be due, or to credit any overpayment, in connection with this Petition, to Deposit Account No. 06-1075, from which the undersigned is authorized to draw.

Prompt consideration and grant of this petition are respectfully requested.

Dated: May 5, 2021

Respectfully submitted,

By: /Kevin A. Rieffel/

Kevin A. Rieffel

Registration No.: 71,318

HALEY GUILIANO LLP

Customer No. 164543

75 Broad Street, Suite 1000

New York, NY 10004

(646) 973-2500

Attorney for Applicant

Electronic Patent Application Fee Transmittal				
Application Number:		09948059		
Filing Date:		05-Sep-2001		
Title of Invention:		WIRELESS ACCESS SYSTEM USING SELECTIVELY ADAPTABLE BEAM FORMING IN TDD FRAMES AND METHOD OF OPERATION		
First Named Inventor/Applicant Name:		Paul F. Struhsaker		
Filer:		Kevin Augustine Rieffel/Romina Gallo		
Attorney Docket Number:		000189-0028-101		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE- 37 CFR 1.17(F) (GROUP I)	1462	1	420	420
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				420

Electronic Acknowledgement Receipt	
EFS ID:	42643492
Application Number:	09948059
International Application Number:	
Confirmation Number:	5591
Title of Invention:	WIRELESS ACCESS SYSTEM USING SELECTIVELY ADAPTABLE BEAM FORMING IN TDD FRAMES AND METHOD OF OPERATION
First Named Inventor/Applicant Name:	Paul F. Struhsaker
Customer Number:	164543
Filer:	Kevin Augustine Rieffel/Romina Gallo
Filer Authorized By:	Kevin Augustine Rieffel
Attorney Docket Number:	000189-0028-101
Receipt Date:	05-MAY-2021
Filing Date:	05-SEP-2001
Time Stamp:	14:27:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$420
RAM confirmation Number	E202155E28200581
Deposit Account	061075
Authorized User	Romina Gallo
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	000189-0028-101-Petition.pdf	122545	no	2
			b554800134fb4cff0d45ab713681727a09f04bcd		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	31129	no	2
			148c13c29677f8a71065102f1600fd288e1e403a		

Warnings:

Information:

Total Files Size (in bytes):	153674
-------------------------------------	--------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C48879

Sale Adjustment Accounting Date:09/13/2021

Effective Date	Sale Accounting Date	Sale Item Reference Number
05/05/2021	09/13/2021	09948059

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20219CB29261837	1462	PETITION FEE- 37 CFR 1.17(F) (GROUP I)	\$420.00	DA



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C48879

Refund Accounting Date:09/13/2021

Effective Date	Sale Item Reference Number	Refund Total
05/05/2021	09948059	\$420.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I20219CB29261837	1462	PETITION FEE- 37 CFR 1.17(F) (GROUP I)	\$420.00	DA	061075



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/948,059	09/05/2001	Paul F. Struhsaker	000189-0028-101	5591
164543	7590	09/15/2021	EXAMINER	
Haley Guiliano LLP (GAS)			AHMED, SALMAN	
75 Broad Street			ART UNIT	PAPER NUMBER
Suite 1000			2616	
NEW YORK, NY 10004-3226			NOTIFICATION DATE	DELIVERY MODE
			09/15/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketRequests@hglaw.com
HGPatentDocket@hglaw.com
haleyguliano_PAIR@firsttofile.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Patent No. 7,230,931 :
Issue Date: June 12, 2007 :
Application No. 09/948,059 :
Filing or 371(c) Date: September 5, 2001 : **DECISION ON PETITION**
Attorney Docket No. 000189-0028-101 :
For: WIRELESS ACCESS SYSTEM :
USING SELECTIVELY ADAPTABLE :
BEAM FORMING IN TSS FROMES AND :
METHOD OF OPERATION :

This is a decision on the petition under 37 CFR 1.182, filed May 5, 2021, requesting issuance of a duplicate Letters Patent for the above-identified patent.

The petition is **GRANTED**.

The Office of Data Management is directed to issue the duplicate Letters Patent.

As authorized, the \$420 fee for the petition under 37 CFR 1.182 has been assessed to petitioner's deposit account.

A copy of this decision is being faxed to the Office of Data Management for issuance of the duplicate Letters Patent.

Telephone inquiries concerning this decision should be directed to undersigned at (571) 272-1642. All other inquiries regarding the issuance of the duplicate Letters Patent should be directed to Rochaun Hardwick in the Office of Data Management at (571) 272-4200.

/April M. Wise/
April M. Wise
Paralegal Specialist, Office of Petitions

cc: Rochaun Hardwick, Randolph Square, 9th Floor, A24 (Fax No. (571) 270-9958)

NOTE: This order is nonprecedential.

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

GENERAL ACCESS SOLUTIONS, LTD.,
Appellant

v.

SPRINT SPECTRUM LLC,
fka Sprint Spectrum L.P.,
Appellee

2021-1824

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2017-
01889.

ON MOTION

O R D E R

Upon consideration of General Access Solutions, Ltd.'s
motion to voluntarily dismiss this appeal pursuant to Fed-
eral Rule of Appellate Procedure 42(b),

IT IS ORDERED THAT:

(1) The motion is granted to the extent that the appeal
is withdrawn.

2 GENERAL ACCESS SOLUTIONS, LTD. v. SPRINT SPECTRUM LLC

(2) Each party shall bear its own costs.

FOR THE COURT

October 27, 2021
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

s29

ISSUED AS A MANDATE: October 27, 2021

(12) **INTER PARTES REVIEW CERTIFICATE** (2499th)

United States Patent
Struhsaker

(10) **Number:** **US 7,230,931 K1**

(45) **Certificate Issued:** **Nov. 15, 2021**

(54) **WIRELESS ACCESS SYSTEM USING
SELECTIVELY ADAPTABLE BEAM
FORMING IN TDD FRAMES AND METHOD
OF OPERATION**

(75) **Inventor:** **Paul F. Struhsaker**

(73) **Assignee:** **GENERAL ACCESS SOLUTIONS,
LTD.**

Trial Number:

IPR2017-01889 filed Jul. 28, 2017

Inter Partes Review Certificate for:

Patent No.: **7,230,931**
Issued: **Jun. 12, 2007**
Appl. No.: **09/948,059**
Filed: **Sep. 5, 2001**

The results of IPR2017-01889 are reflected in this inter partes review certificate under 35 U.S.C. 318(b).

INTER PARTES REVIEW CERTIFICATE

U.S. Patent 7,230,931 K1

Trial No. IPR2017-01889

Certificate Issued Nov. 15, 2021

1

2

AS A RESULT OF THE INTER PARTES
REVIEW PROCEEDING, IT HAS BEEN
DETERMINED THAT:

Claims **28-29** are found patentable.

5

Claims **1-27** are cancelled.

* * * * *

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Eastern District of Texas on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:22-cv-394	DATE FILED 10/10/2022	U.S. DISTRICT COURT Eastern District of Texas
PLAINTIFF General Access Solutions, LTD.		DEFENDANT Verizon Communications, Inc., et al
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,230,931	6/12/2007	General Access Solutions, LTD.
2 9,426,794	8/23/2016	General Access Solutions, LTD.
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy