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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JERROLD PROTHERO and NIGEL JONES

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Appeal 2018-002956  
Application 14/478,011  
Technology Center 2400

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BEFORE MAHSHID D. SAADAT, ALLEN R. MacDONALD, and  
NABEEL U. KHAN, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Astrapi Corporation. Appeal Br. 2.

## STATEMENT OF THE CASE

Appellant's invention relates to a method and system for communicating involving converting input communication symbols into transmittable waveforms using non-periodic functions. Spec. ¶¶ 5–8.

Representative claim 1 under appeal read as follows;

1. A method for communicating comprising:

obtaining one or a plurality of input communication symbols selected from a set of communication symbols;

converting the one or a plurality of input communication symbols into one or a plurality of transmittable waveforms using one or a plurality of non-periodic functions selected from a set of non-periodic functions; and

transmitting the one or a plurality of transmittable waveforms over a communication channel.

## REFERENCES AND REJECTIONS

Claims 1–20 stand rejected on the ground of non-statutory double patenting as being unpatentable over claims 1, 3–7, 20, 21, 23–28, 32, and 34–38 of U.S. Patent No. 8,861,327 (“the ’327 patent”). *See* Ans. 2–4.

Claims 1–20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bryant (US 2003/0067990 A1; pub. Apr. 10, 2003). *See* Ans. 4–12.

## ANALYSIS

### *Non-Statutory Double Patenting Rejection*

We have reviewed the Examiner's non-statutory double-patenting rejections in light of Appellant's arguments in Appellant's Appeal Brief that the Examiner has erred. We are unpersuaded by Appellant's contentions and concur with the findings and conclusions reached by the Examiner as explained below.

The Examiner finds claims 1–20 are anticipated by the claims of the '327 patent. *See* Ans. 2–4, 13. Taking independent claim 1 as an example, the Examiner finds that claim 1 of the '327 patent contains all the limitations of claim 1.<sup>2</sup> *See* Ans. 2–3, 13. Thus, as found by the Examiner, claim 1 is not patentably distinct from claim 1 of the '327 patent. *See* Ans. 13 (citing Manual of Patent Examining Procedure (“MPEP”) § 804, II.B.2(b)).

MPEP § 804 states:

Before consideration can be given to the issue of double patenting, two or more patents or applications must have *at least one common inventor, common applicant, and/or be commonly assigned/owned or non-commonly assigned/owned but subject to a joint research agreement* as set forth in 35 U.S.C. 102(c) or in pre-AIA 35 U.S.C. 103(c)(2) and (3).

...

There are generally two types of double patenting rejections. One is the “same invention” type double patenting rejection based on 35 U.S.C. 101 which states in the singular that an inventor “may obtain a patent.” The second is *the “nonstatutory-type” double patenting rejection based on a judicially created doctrine grounded in public policy and which is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent.*

The doctrine of nonstatutory double patenting also seeks to prevent the possibility of multiple suits against an accused infringer by different assignees of patents claiming patentably indistinct variations of the same invention. *In re Van Ornum*, 686 F.2d 937, 944-48, 214 USPQ 761, 767-70 (CCPA 1982).

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<sup>2</sup> The Examiner made an explicit finding regarding claim 1, and claims 2–6 which depend upon claim 1. *See* Ans. 2–4. As indicated in its Appeal Brief, Appellant assumed independent claims 7 and 15 were rejected in a manner similar to the manner claim 1 was rejected, and did not provide separate arguments for patentability regarding claims 7 and 15. Appeal Br. 4, n.1.

...

Nonstatutory double patenting includes rejections based on **anticipation**, a one-way determination of “obviousness,” or a two-way determination of “obviousness.”

MPEP § 804 (emphasis added).

The instant application is a continuation application of the '327 patent, and the instant application and the '327 patent share at least one common inventor and a common applicant. Thus, consideration of the issue of double patenting is warranted.

MPEP § 804 further states:

A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is **not patentably distinct** from the reference claim(s) because the examined application claim is either **anticipated by**, or would have been obvious over, the reference claim(s). *See, e.g., In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). In determining whether a nonstatutory basis exists for a double patenting rejection, the first question to be asked is: is any invention claimed in the application **anticipated by**, or an obvious variation of, an invention claimed in the patent? If the answer is yes, then a nonstatutory double patenting rejection may be appropriate.

...

A nonstatutory double patenting rejection is appropriate where a claim in an application under examination claims subject matter that is different, **but not patentably distinct**, from the subject matter claimed in a prior patent or a copending application. The claim under examination **is not patentably distinct** from the reference claim(s) if the claim under examination is **anticipated by** the reference claim(s). *See, e.g., In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015-16 (Fed. Cir.1993). This type of nonstatutory double patenting situation arises when the

claim being examined is, for example, generic to a species or sub-genus claimed in a conflicting patent or application, *i.e., the entire scope of the reference claim falls within the scope of the examined claim*. In such a situation, a later patent to a genus would, necessarily, extend the right to exclude granted by an earlier patent directed to a species or sub-genus. In this type of nonstatutory double patenting situation, an obviousness analysis is not required for the nonstatutory double patenting rejection. The nonstatutory double patenting rejection in this case should explain the fact that the species or sub-genus claimed in the conflicting patent or application anticipates the claimed genus in the application being examined and, therefore, a patent to the genus would improperly extend the right to exclude granted by a patent to the species or sub-genus should the genus issue as a patent after the species or sub-genus.

*Id.* (emphasis added)

As found by the Examiner, claim 1 of the '327 patent contains all the limitations of claim 1, and thus, the scope of claim 1 of the '327 patent falls within the scope of claim 1. Thus, the Examiner correctly determines that claim 1 is not patentably distinct from claim 1 of the '327 patent because claim 1 of the '327 patent anticipates claim 1. Accordingly, we conclude that the nonstatutory double-patenting rejection of claim 1 is appropriate.

Appellant argues claim 1 does not have the same limitations as claim 1 of the '327 patent, and thus, claims 1–20 are patentably distinct from the claims of the '327 patent. *See* Appeal Br. 4–5. However, the test to determine whether an examined claim and a reference claim are patentably distinct is not simply whether the examined claim and the reference claim have different limitations. Instead, as described above, the test is whether the examined claim is either anticipated by, or would have been obvious over, the reference claim.

Thus, we are not persuaded that the Examiner erred in finding the claims of the '327 patent anticipate independent claims 1, 7, and 15. No separate arguments are presented for the dependent claims. *See* Appeal Br. 4–5. Therefore, we are not persuaded that the Examiner erred finding the claims of the '327 patent also anticipate claims 2–6, 8–14, and 16–20. Accordingly, we sustain the rejection of claims 1–20 on the ground of non-statutory double patenting as being unpatentable over the claims of the '327 patent.

*Rejection Under 35 U.S.C. §102(b)*

We have reviewed the Examiner's rejections under 35 U.S.C. § 102(b) in light of Appellant's arguments in Appellant's Appeal Brief that the Examiner has erred. We are also unpersuaded by Appellant's contentions and concur with the findings and conclusions reached by the Examiner as explained below.

The Examiner finds Bryant discloses, *inter alia*, “converting the one or a plurality of input communication symbols into one or a plurality of transmittable waveforms using one or a plurality of non-periodic functions selected from a set of non-periodic functions,” as recited in claim 1, and similarly recited in claims 7 and 15. *See* Ans. 5, 7, 10 (citing Bryant ¶¶ 13, 19, 21, 24, 28). The Examiner further finds Bryant discloses a digital communication system that processes a signal in a compressor characterized by a non-linear function, and that the non-linear function discloses the “one or a plurality of non-periodic functions” recited in claim 1. *See* Ans. 15–20 (citing Bryant ¶¶ 13, 19, 21, 24, 28, 30).

Appellant contends Bryant does not teach or suggest the aforementioned limitation of claim 1 because Bryant does not teach or suggest using “one or a plurality of non-periodic functions,” as recited in

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claim 1. *See* Appeal Br. 5. Rather than describing non-periodic functions, Appellant argues Bryant describes non-linear compression of signals which a person of ordinary skill in the art would assume to be based on traditional periodic symbol waveforms. *See id.* at 5–8.

We are not persuaded by this argument. As correctly found by the Examiner, Bryant discloses that the non-linear function that serves as the compression function can include “a variety of choices,” and “a number of possible choices . . . including, without limitation, inverse tangent, inverse linear-plus-power, inverse sine, and mu law.” Bryant ¶ 30. The Examiner further provides evidence that a non-linear function can include a non-periodic function, citing U.S. Patent Application Publication No. 2011/0150048, which is incorporated by reference in Appellant’s Specification. *See* Ans. 18 (citing claim 13 of U.S. Patent Application Publication No. 2011/0150048).<sup>3</sup> Thus, we agree with the Examiner that Bryant discloses “one or a plurality of non-periodic functions,” of claim 1.

Appellant further contends that, even if Bryant does describe non-periodic symbol waveforms, there is no mention of the use of spirals. Appeal Br. 6. This argument is not persuasive either, as we agree with the Examiner that the argued feature (*i.e.*, non-periodic signal modulation based on spirals) is not recited in the claim. *See* Ans. 18.

Thus, we are not persuaded that the Examiner erred in finding Bryant anticipates independent claims 1, 7, and 15. No separate arguments are presented for the dependent claims. *See* Appeal Br. 5–8. Therefore, we are not persuaded that the Examiner erred in finding Bryant anticipates claims

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<sup>3</sup> We note that Appellant’s Specification discloses examples of non-periodic functions and characterizes the examples of non-periodic functions as “known in the art.” *See* Specification ¶¶ 3, 25.

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2–6, 8–14, and 16–20. Accordingly, we sustain the rejection of claims 1–20 under 35 U.S.C. § 102(b).

### CONCLUSION

We affirm the Examiner’s decision to reject claims 1–20 on the ground of non-statutory double-patenting.

We affirm the Examiner’s decision to reject claims 1–20 under 35 U.S.C. § 102(b).

### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–20		Non-statutory Double Patenting	1–20	
1–20	102(b)	Bryant	1–20	
<b>Overall Outcome</b>			1–20	

### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED