

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMERICAN SIMMENTAL ASSOCIATION,
Petitioner,

v.

LEACHMAN CATTLE OF COLORADO, LLC,
Patent Owner.

Case PGR2015-00003
Patent 8,660,888 B2

Before PHILLIP J. KAUFFMAN, MICHAEL W. KIM, and
WILLIAM M. FINK, *Administrative Patent Judges*.

KIM, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. *Background*

American Simmental Association (“Petitioner”) filed a Corrected Petition (“Pet.”) for post-grant review of claims 1–20 of U.S. Patent No. 8,660,888 B2 (“the ’888 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 321–329. Paper 6. Leachman Cattle of Colorado, LLC (“Patent Owner”) filed a Preliminary Response. Paper 11; “Prelim. Resp.” On June 19, 2015, we instituted a post-grant review of claims 1–20 on certain grounds of unpatentability alleged in the Petition. Paper 19 (“Dec.”). After institution of trial, Patent Owner filed a Patent Owner Response (Paper 37, “PO Resp.”) and Petitioner filed a Reply (Paper 40, “Pet. Reply”). Patent Owner also filed a Motion to Amend (Paper 36, “PO Amend.”) to which Petitioner filed a Response (Paper 41, “Pet. Resp.”) and Patent Owner filed a Reply (Paper 44, “PO Reply”). Patent Owner filed a Motion to Exclude (Paper 48, “PO Mot.”), to which Petitioner filed a Response (Paper 51, “Pet. Mot. Resp.”) and Patent Owner filed a Reply (Paper 52, “PO Mot. Reply”). An oral hearing was held on March 1, 2016. Paper 55 (“Tr.”).

The Board has jurisdiction under 35 U.S.C. § 6(c). In this Final Written Decision, issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73, we determine that Petitioner has shown by a preponderance of the evidence that all claims for which trial was instituted, i.e. claims 1–20, are unpatentable. Patent Owner’s Motion to Amend is *denied*. Patent Owner’s Motion to Exclude is *dismissed* as moot.

B. *The ’888 Patent*

The ’888 patent relates generally to genetic quality and relative market value of livestock. Ex. 1001, 1:21–23. The ’888 patent further discloses the following:

More specifically, embodiments of the present invention facilitate an owner or potential buyer of one or more sale groups of livestock to evaluate the relative market value of the sale groups based on predictions derived from genetic merit estimates of the herd.

Ex. 1001, 1:23–27. Ranchers invest significant amounts of money to build quality herds of livestock with desired genetic merits. Ex. 1001, 1:29–30. Most ranchers, however, are not able to realize an increased value for their livestock with desired genetic merits, and instead sell their annual livestock crops on the commodity market at or near average price for all livestock. Ex. 1001, 1:33–36. Therefore, according to the '888 patent, it is very important to determine what the actual value of the livestock is, and more specifically what premium or discount the livestock should command based on these desired genetic merits. Ex. 1001, 1:46–48.

C. Related Matters

Petitioner and Patent Owner identify the following reissue application involving the '888 patent: 14/516,353 (“the '353 application”). Pet. 1; Paper 9, 2.¹ Patent Owner identifies additionally the following related patents and patent applications: U.S. Patent No. 8,725,557 (“the '557 patent”); U.S. Patent Application No. 14/516,372 (re-issue of the '557 patent) (“the '372 application”); PCT/US2014/019775; U.S. Patent Application No. 14/226,236; and U.S. Patent Application No. 14/286,857. Paper 9, 2.²

¹ Patent Owner lists the '353 application as a reissue application for U.S. Patent No. 8,725,557. Petitioner, however, lists the '353 application as a reissue application of the '888 patent, and our independent analysis of public records confirms that Petitioner is correct. Accordingly, we treat Patent Owner's identification as an inadvertent, clerical error.

² Patent Owner lists the '372 application as a reissue application for the '888 patent. Based on Petitioner's representations, however, concerning the '353 application and our own independent analysis of the relevant public records, we determine that the '372 application is a reissue application of the '557 patent.

Petitioner and Patent Owner additionally assert that there are currently no pending district court proceedings concerning the '888 patent. Pet. 1; Paper 9, 3.

Petitioner also has filed a Petition for post-grant review of the '557 patent: PGR2015-00005.

D. Illustrative Claim

Independent claim 16 is reproduced below:

16. A computer-implemented method to determine relative market value of a sale group, the sale group including cattle that are fed and harvested for beef production, the method comprising:

determining, by one or more processors, a plurality of economic weighting factors responsive to a plurality of genetic merit estimates associated with the sale group and one or more economic outcomes;

determining, by one or more processors, relative market value and ranking of the genetic merits of the sale group responsive to the plurality of genetic merit estimates and the plurality of economic weighting factors; and

outputting to one or more electronic interfaces, positioned to display an online genetic merit scorecard to thereby define one or more genetic merit interfaces, the online genetic merit scorecard for the sale group responsive to determining the relative market value and the ranking of the genetic merits of the sale group, the online genetic merit scorecard including the relative market value and one or more rankings of genetic merits of the sale group being displayed on the one or more genetic merit interfaces.

E. Instituted Grounds of Unpatentability

A trial was instituted as to the unpatentability of claims 1–20 on the following grounds:

Accordingly, we treat Patent Owner's identification as an inadvertent, clerical error.

Reference(s)	Basis	Challenged Claim(s)
(not applicable)	§ 101	1–20
Wang ³ and the Angus system ⁴	§ 103	1–4 and 6–20
Wang, the Angus system, and Goddard ⁵	§ 103	5

Petitioner also cites the Declaration of Dr. Matthew Spangler (Ex. 1016; “the Spangler Decl.”).

F. Eligibility of Patent for Post-Grant Review

The post-grant review provisions of the Leahy-Smith America Invents Act (“AIA”)⁶ apply only to patents subject to its first inventor to file provisions. AIA § 6(f)(2)(A). Specifically, the first inventor to file provisions apply to any application for patent, and to any patent issuing thereon, that contains or contained at any time a claim to a claimed invention that has an effective filing date on or after March 16, 2013. AIA § 3(n)(1). Furthermore, “[a] petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent or of the issuance of a reissue patent (as the case may be).” 35 U.S.C. § 321(c); *see also* 37 C.F.R. § 42.202(a).

³ US 2007/0105107 A1, pub. May 10, 2007 (“Wang”; Ex. 1004).

⁴ Petitioner provides the following evidence in support of “the Angus system”: Declaration of Ms. Ginette Kurtz (“Kurtz Decl.”; Ex. 1011); Declaration of Dr. Dan Moser (“Moser Decl.”; Ex. 1012); Printout from Angus’s website, 2014 (“Angus 1”; Ex. 1013); Printout from AngusSource website, 2010 (“Angus 2”; Ex. 1014).

⁵ M E Goddard, *Selection Indices for Non-linear Profit Functions*, 64 Theor. Appl. Genet. 339–344 (1983).

⁶ Pub L. No. 112-29, 125 Stat. 284 (2011).

Petitioner asserts that the '888 patent is a first-to-file patent, and indicates that the earliest possible effective date of the '888 patent is April 13, 2013. Pet. 2–3. Petitioner asserts further that the instant Petition is being filed within nine months of the February 25, 2014, issue date of the '888 patent. Pet. 2–3. Patent Owner does not dispute these assertions, and we agree that they are accurate. Accordingly, we conclude that the '888 patent was eligible for post-grant review at the time the Petition was filed.

II. ANALYSIS

A. *Level of Ordinary Skill*

Petitioner asserts that a person of ordinary skill in the art of the '888 patent would have “at least a Master’s degree in Animal Breeding and Genetics plus at least 5–7 years of experience in the field, or a PhD in Animal Breeding and Genetics plus at least 2–4 years of experience in the field.” Pet. 9–11 (citing Ex. 1016 ¶¶ 6–12). Patent Owner contends generally that Petitioner’s asserted level of ordinary skill is too high, countering with the following:

A person of ordinary skill in the field of the '888 Patent (the “POSITA”) would have been someone with a good working knowledge of the cattle industry (including the feeder calf production market) and agricultural economics, mathematics, and computer programming as applied to this industry. (Ex. 2022, ¶ 52; Ex. 2024, ¶ 50.) A POSITA would have also had a basic understanding of breeding and genetics, as applied to the feeder calf production market. (Ex. 2022, ¶ 52; Ex. 2024, ¶ 50.) A POSITA would have gained her knowledge through a Bachelor of Science degree in animal science, agricultural business, or a comparable field (including coursework in beef production), and three to five years of relevant work experience. (Ex. 2022, ¶ 52; Ex. 2024, ¶ 50.) This would necessarily include experience in the purchase and sale of feeder calves. (Ex. 2022, ¶ 52; Ex. 2024, ¶ 50.)

PO Resp. 23–24. Petitioner responds that because evaluation of genetic quality is involved, a bachelor of science degree is inadequate, and that in requiring

economics and software backgrounds, Patent Owner improperly ignores that the person of ordinary skill here is the developer, and not the end-user. Pet. Reply 4.

Ultimately, we discern that Petitioner and Patent Owner are not very far apart. On education, we agree with Petitioner that evaluating genetic quality is sufficiently complex that it would require, at a minimum, a Master's Degree in the field. On work experience, we agree with both parties that several years of experience in the field is necessary, with the optimum for a Master's Degree being five years, and commensurately less for an individual possessing a PhD. We agree with Patent Owner that some understanding of economics and software is required, but agree with Petitioner that such understanding need only be a basic one that can be readily acquired through work experience in the field, with no formal education in that field being necessary. Finally, we disagree with Patent Owner that formal training or experience specific to the feeder calf market needs to be addressed separately, as, for the reasons set forth below, we are unpersuaded that evaluating feeder calves as a subgroup differs materially from evaluation of cattle overall, and that one of ordinary skill in evaluating of genetic quality of cattle generally would not have been familiar with feeder calves specifically, especially when the overwhelming goal of cattle production is to sell beef, of which the primary type sold is feeder calves.

Perhaps more importantly, the significance of the level of ordinary skill in the art here is the role it plays in an obviousness analysis, and Patent Owner has not explained in a sufficiently persuasive manner how the disparate definitions impact dispositively the obviousness analysis. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention.”); *Ryko Mfg. Co. v. Nu-Star*,

Inc., 950 F.2d 714, 718 (Fed. Cir. 1991) (“The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.”).

Accordingly, unless expressly indicated otherwise, we determine that a specific finding on the level of skill in the art is not required, because the prior art itself reflects an appropriate skill level. *See Okajima*, 261 F.3d at 1355.

B. *Claim Construction*

In a post-grant review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.200(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1277–78 (Fed. Cir. 2015) (“We conclude that Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA.”), *cert. granted sub nom. Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 890 (mem.) (2016). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). We construe the terms below in accordance with these principles.

1. *“relative market value”*

Each of independent claims 1, 9, and 16 recites “relative market value.” For example, independent claim 16 recites “determining, by one or more processors,

relative market value and ranking of the genetic merits of the sale group responsive to the plurality of genetic merit estimates and the plurality of economic weighting factors.” Ex. 1001, 50:31–34. Petitioner proffers that “relative market value” should be construed as follows: “the value of the sale group as compared to the value of a baseline group.” Pet. 12–13 (citing Ex. 1001, 19:25–34; Ex. 1016 ¶ 28). The ’888 patent discloses the following concerning “relative market value”:

The relative market value may be expressed in various ways. In one embodiment, the relative market value is a difference in market value per head of a sale group compared to the market value of a sale group that represents the average progeny of all registered bulls in the country or market region. In another embodiment, the relative market value is a difference in market value per centum weight of the sale group compared to the market value per centum of a sale group that represents the average progeny of all registered bulls in the country or market region.

Ex. 1001, 19: 25–34. In the Decision on Institution, we construed “relative market value,” in the context of the aforementioned surrounding claim language, as “the market value of a sale group as compared to the market value of any other market group.” Dec. 7 (citing Ex. 1001, 19:25–34).⁷ Petitioner appears to agree with this construction. Pet. Reply 7–8 (citing Ex. 1001, 20:48–53; 21:19–23; 23:4–6; 24:44–46; 25:32–53).

Through their assertions concerning the prior art, Patent Owner may be implicitly asserting that “market value of any other market group” only makes sense if it is the “national market average value.” PO Resp. 55–56. We disagree. The claim limitation itself reads “relative market value,” and does not include either the “national” or “average,” and the aforementioned portion of the ’888

⁷ Divorced from surrounding claim language, we construe “relative market value” as “the market value of something as compared to the market value of any other market group.”

patent discloses expressly that “relative market value may be expressed in *various ways*,” providing a non-limiting example of at least “the market value of a sale group that represents the average progeny of all registered bulls in the *country or market region*.”

Also through their assertions concerning the prior art, Patent Owner appears to be implicitly asserting that by including the phrase “any other market group,” any values used to calculate the “relative market value” must be of a format that is standardized to allow comparisons across *all* other market groups, for example, across different breeds. PO Resp. 52–56. We disagree. Neither the express claim language nor the aforementioned portion of the ’888 patent requires that any values used to calculate the recited “relative market value,” or even the “relative market value” itself, be comparable across *all* market groups. Certainly calculating a value of one breed that is of a format that allows direct comparisons to a value of any other breed would appear to be more useful. The claim language itself, however, does not require such a result. For example, even if any values are only applicable to one specific breed, so long as there are two different market groups of that specific breed that are compared using that format, the value resulting from that comparison would still meet the recited “relative market value.” To eliminate any such confusion, we modify the aforementioned construction of “relative market value,” in the context of the aforementioned surrounding claim language, as follows: “the market value of a sale group as compared to the market value of *at least one* other market group.”

2. “*sale group including cattle that are fed and harvested for beef production*”

Each of independent claims 1, 9, and 16 recites “sale group including cattle that are fed and harvested for beef production.” For example, independent claim 16 recites “[a] computer-implemented method to determine relative market value

of a sale group, the sale group including cattle that are fed and harvested for beef production” and “determining, by one or more processors, relative market value and ranking of the genetic merits of the sale group responsive to the plurality of genetic merit estimates and the plurality of economic weighting factors.” Ex. 1001, 50:23–34. Petitioner proffers that “sale group” should be construed as follows: “one or more animals.” Pet. 13 (citing Ex. 1001, 11:5–6, 34–35). In the Decision on Institution, we construed “sale group including cattle that are fed and harvested for beef production” as “at least bovine animals fed and harvested for beef production.” Dec. 8–9 (citing Ex. 1001, 11:5–6, 11:34–35; Ex. 2001). We clarified also that, “‘fed and harvested for beef production’ appears to be an intended use that all cattle would meet, as any cattle would appear to be capable of being ‘fed and harvested for beef production,’ no matter what purpose the cattle are actually used for.” Dec. 9. Patent Owner makes several assertions concerning this construction (PO Resp. 27–30), to which Petitioner replies (Pet. Reply 5–7).

As an initial matter, the term “sale group” appears in the claims of both the ’888 patent and ’557 patent, which is related to the ’888 patent and is the subject of a related post grant review in PGR2015-00005. Petitioner asserts that “sale group” should be construed consistently across both proceedings, in that in PGR2015-00005, “sale group” was construed as “one or more animals,” whereas here, “sale group” is construed as “at least bovine animals fed and harvested for beef production.” Specifically, Petitioner asserts that the construction here should be “at least one bovine animal[] fed and harvested for beef production,” i.e., such that “sale group” can consist of a “single animal.” We disagree.

As an initial matter, we acknowledge that there are several factors weighing in favor of Petitioner’s assertion that “sale group” can consist of a “single animal.” For example, we acknowledge that the Specification provides an explicit definition

of “sale group” as follows: “[a]s used herein, a sale group is an animal or a plurality of animals for which a relative market value is determined.” Ex. 1001, 11:5–6. This definition is confirmed throughout the rest of the paragraph within which the explicit definition appears, and indeed expressly includes “a single animal” within the explicit definition of “sale group.” Ex. 1001, 11:34–35 (“[i]n certain embodiments, a sale group may comprise a single animal”). We acknowledge further, as we must, that “sale group” in the ’888 patent should be construed consistent with the use of the term in the ’557 patent. *See NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) (when construing claims in patents that derive from the same parent application and share common terms, “we must interpret the claims consistently across all asserted patents”); *see also Belden Inc. v. Berk-Tek LLC*, 610 F. App’x 997, 1000, 1006 (Fed. Cir. 2015) (nonprecedential) (affirming Board decision where Board considered definitions in parent, grandparent applications in construing claims). As Patent Owner correctly points out, however, in the ’888 patent the claim term “sale group” is modified by the plural claim term “cattle.” Certainly, the use of the term “cattle” is consistent with the aforementioned definition of “sale group” set forth in the Specification, in that “cattle” are clearly “an animal or a plurality of animals.” It is just that, here, by modifying “sale group” using explicit claim language to include “cattle,” Patent Owner is evincing an express intent to exclude single animals. Accordingly, we are unpersuaded by Petitioner’s assertion that “sale group” as recited in independent claims 1, 9, and 16 should include “single animals.”

Patent Owner asserts also that the phrase “fed and harvested for beef production” should be given patentable weight. We agree, as the aforementioned phrase is an express claim limitation. Patent Owner then asserts, however, that construing “fed and harvested for beef production” as essentially applying to all

bovine animals, in that all bovine animals are capable of being “fed and harvested for beef production,” is unreasonable because it would, as a practical matter, read the limitation out of the claim. PO Resp. 29. In support of this contention, Patent Owner advances the following analogy:

Interpreting the claim phrase “bovine animals fed and harvested for beef production” to simply mean “bovine animals” would read a fundamental element out of the claim and ignore a distinction that the POSITA would have drawn. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (“The inquiry into how a [POSITA] understands a claim term provides an objective baseline from which to begin claim interpretation.”) It would re-define the claim to refer to any cattle. This can be likened to a patent claim that recites “car keys.” One would readily recognize that car keys refers to a particular type of key: keys to lock or unlock a car. Reading out the word “car,” simply because, in theory, all types of keys (e.g., house keys, bike lock keys, safe keys) could be used for any purpose, including a car, would fundamentally change the meaning of the claimed phrase.

PO Resp. 29. We disagree. In the context of Patent Owner’s example, the appropriate analogy would not be “car keys,” but “keys for opening a lock.” Certainly, “for opening a lock” expressly modifies “keys” and is given patentable weight. As the purpose of a key is to open a lock, however, the fact that the practical effect is that all keys meet “keys for opening a lock” does not indicate that the construction is incorrect. Instead, while claim construction requires following the express claim limitations to their full and logical conclusion, if that conclusion is that certain claim limitations, even when given full effect in light of the specification, do not materially limit the claim further, we are unpersuaded that it is proper to artificially further limit the claim merely because additional words are used.

Patent Owner asserts additionally that “cattle that are fed and harvested for beef production” should be construed as referring to a particular type of cattle,

namely, “feeder cattle.” We disagree. Initially, and most importantly, the claim limitation expressly recites “cattle that are fed and harvested for beef production,” and not “feeder cattle.” *Cf. CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”). Given this express reality, Patent Owner appears to be asserting that one of ordinary skill would have understood “cattle that are fed and harvested for beef production” as being synonymous and interchangeable with “feeder cattle.” In support of this assertion, Patent Owner cites the Declaration of Dr. Woodward (Ex. 2022), the Declaration of Dr. Golden (Ex. 2024), and Exs. 2031, 2032. Petitioner counters with the following:

All cattle born are ultimately destined to be harvested into “beef,” regardless of what roles they may have also played in their lifetimes. (Ex. 1019, ¶ 8.) Even if beef production is not the primary purpose for animals at conception, it is a purpose for which they are all bred and fed. (*Id.*) When pressed, Patentee’s own witnesses agree that all “types” of cattle – “feeders” and [“]breeders” – are destined for slaughter. (Ex. 1017, 50:10–25; 57:3–58:24; Ex. 1018, 51:4–53:6; 53:7–54:20; 55:5–56:10.)

Pet. Reply 7. After considering this evidence collectively in light of the Specification, we are unpersuaded that “cattle that are fed and harvested for beef production” should be construed as being synonymous and interchangeable with “feeder cattle.”

Dr. Woodward asserts that “feeder cattle” is a term of art in the cattle industry that means cattle fed and harvested for beef production. Ex. 2022 ¶¶ 20, 66; *see also* Ex. 2024 ¶ 24. For support, Dr. Woodward cites the following portions of the ’888 patent: 1:39–40, 2:41–42, 13:16–19. We have reviewed those citations, however, we are unable to discern how they support Patent Owner’s position that “cattle that are fed and harvested for beef production” are

synonymous and interchangeable with “feeder cattle.” Indeed, in our own review of the ’888 patent, our conclusion is that “feeder cattle” are a subset of, and not synonymous with, “cattle that are fed and harvested for beef production.” There are several factors that inform our conclusion.

First, broad statements to the present invention appear to almost exclusively use the language “fed and harvested for beef production” (Ex. 1001, 2:41–42, 3:8–9, 3:15–16, 11:40–43, 11:57–59, 27:48–49, 28:20–21), while the references to “feeder” appears to be largely confined to discussions of the exemplary embodiments concerning “feeder *calves*,” not “feeder *cattle*,” at Figures 3B–3F and 6 at columns 21–26 of the ’888 patent. Indeed, as noted in columns 21–26, while some formulas for calculating “Relative market value of the sale group” include a “Feeder Calf Value” variable, others do not. Ex. 2031 discloses that “calves” are an age-based subset of “cattle,”⁸ and so it would appear that “feeder” also denotes a subset of “cattle.” These findings weigh against “cattle that are fed and harvested for beef production” being considered synonymous and interchangeable with “feeder cattle.”

The other major reference to “feeder cattle” is at column 32, lines 36–65 concerning the “Reputation Feeder Cattle (RFC)” certification program. These citations, however, also weigh against Patent Owner’s position, as “feeder cattle” is not used in conjunction with descriptions of other certification programs, such as “Non-Hormone Treated Cattle (NHTC)” program, “Never Ever 3 (NE3)” program, and “Grass Fed” program, again indicating that “feeder cattle” are a subset of, and not synonymous with, “cattle that are fed and harvested for beef production.” To

⁸ “Feeder cattle” is defined as “[s]teers or cows mature enough to be placed in a feedlot where they will be fattened prior to slaughter. Feeder calves are less than 1 year old; feeder yearlings are between 1 and 2 years old.” Ex. 2031.

be sure, there may be some portions of the '888 patent that support Patent Owner's position, however, those portions are outweighed by the above-referenced portions of the '888 patent, especially in light of the fact that the claim limitation expressly recites "cattle that are fed and harvested for beef production," and not "feeder cattle."

Furthermore, we credit paragraph 8 of Dr. Spangler's Second Declaration, which agrees with our position, and even refers correctly to the fact that the '888 patent refers mostly to "feeder *calves*," and not "feeder *cattle*." We also credit the cross-examination testimony of Dr. Woodward and Dr. Golden that the line between "seedstock cattle" and "feeder cattle" is not always clear, again, supporting our determination that "feeder cattle" are a subset of, and not synonymous with, "cattle that are fed and harvested for beef production" ("[i]f the seedstock producer sold the calf and he went into a feedlot because he was a culled calf, the feedlot operator wouldn't distinguish him probably as anything other than a feeder calf" Ex. 1018, 52:15–18), and that at least some seedstock cattle ends up as hamburger meat. Ex. 1017, 58:11–21; Ex. 1018, 54:19–20.

Patent Owner asserts that there is some ambiguity in the above construction as to whether or not the claim term "sale" in "sale group" is taken adequately into consideration. We are persuaded that some aspect of "sale" should be included in the express construction of "sale group." We determine also that the appropriate articulation of "sale" for "sale group," in the context of the surrounding claim language, is "for which a relative market value is determined." The '888 patent confirms this understanding. Ex. 1001, 11:5-6 ("[a]s used herein, a sale group is an animal or plurality of animals *for which a relative market value is determined*") (emphasis added). Accordingly, to give effect to the word "sale" consistent with the specification, we modify our construction as follows: "at least bovine animals

fed and harvested for beef production, **for which a relative market value is determined.**”

After considering all evidence and assertions concerning this claim construction, we construe “sale group including cattle that are fed and harvested for beef production,” in the context of surrounding claim language, as “at least bovine animals fed and harvested for beef production, for which a relative market value is determined.”

3. *“genetic merit scorecard”*

Each of independent claims 1, 9, and 16 recite “genetic merit scorecard.” Petitioner asserts that “genetic merit scorecard” should be construed as “visual display of genetic merit information.” Pet. 16–17 (citing Ex. 1001, Fig. 6). Patent Owner does not dispute this construction. After considering all evidence and assertions concerning this claim construction, we agree with Petitioner that “genetic merit scorecard” should be construed as “visual display of genetic merit information.”

B. Claims 1–4 and 6–20 as Obvious over Wang and the Angus System

Petitioner contends that claims 1–4 and 6–20 are obvious over Wang and the Angus system. Pet. 55–77 (citing Exs. 1001, 1004, 1011–1014, 1016). Patent Owner disagrees. PO Resp. 31–64 (citing Exs. 1001, 1004, 1011–1014, 1016, 2014, 2022, 2024, 2033, 2034). Petitioner replies. Pet. Reply 13–25 (citing Exs. 1001, 1004, 1013, 1014, 1016–1022, 2005, 2036, 2037). Claims 1, 9, and 16 are independent.

1. *Whether the Angus System is Prior Art*

Petitioner provides the following evidence in support of “the Angus system”: Declaration of Ms. Ginette Kurtz (“Kurtz Decl.”; Ex. 1011);⁹ Declaration of Dr. Dan Moser (“Moser Decl.”; Ex. 1012); Printout from Angus’s website, 2014 (“Angus 1”; Ex. 1013); and Printout from AngusSource website, 2010 (“Angus 2”; Ex. 1014). In its Reply, Petitioner did not provide or identify any additional evidence concerning “the Angus system.”

Patent Owner asserts that Petitioner has not met its burden of showing that the Angus system is prior art. PO Resp. 31–39. Specifically, Patent Owner asserts that Petitioner has not shown that Exhibits 1013 and 1014 provided sufficient corroboration for the statements made in the Declarations of Ms. Kurtz and Dr. Moser that the Angus system is prior art. All statements made by witnesses, and the underlying evidence corroborating those statements, are evaluated under a “rule of reason” framework. *Cf. Fleming v. Escort Inc.*, 774 F.3d 1371, 1376–77 (Fed. Cir. 2014) (citing *Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350 (Fed. Cir. 2001)) (in an analogous priority of invention context, oral testimony and corroborative evidence is “evaluated under ‘the rule of reason,’ whereby ‘all pertinent evidence is examined in order to determine whether the [declarant’s] story is credible’”).

At the outset, we note that certain factors weigh in favor of Petitioner. Most prominently, we find that Ms. Kurtz and Dr. Moser are not related to the real party-in-interest for Petitioner, the American Simmental Association. Both Dr. Moser

⁹ In the intervening period between Ms. Kurtz’s Declaration and deposition. Ms. Kurtz changed her name to Ms. Gottswiller. PO Resp. 32; Ex. 2033, 6:3–15. For the purposes of consistency and clarity, we will refer only to Ms. Kurtz, as that name was introduced earlier in time in the proceeding, and the Declaration is in the name of Ms. Kurtz.

and Ms. Kurtz declare that they are affiliated with the American Angus Association, and no argument or evidence has been advanced that the American Angus Association is related to the American Simmental Association. Pet. 1; Ex. 1011 ¶ 1; Ex. 1012 ¶ 1. Accordingly, for this reason, in the overall “rule of reason” framework, we accord more weight to the testimony of Ms. Kurtz and Dr. Moser than we would an interested party. *See Finnigan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354, 1369 (Fed. Cir. 1999) (“the level of interest of the testifying witness is an important consideration when such testimony is offered to corroborate another witness’s testimony.”)

Of course, even testimony of disinterested parties requires corroboration. *See Finnigan*, 180 F.3d at 1369 (“corroboration is required of any witness whose testimony alone is asserted to invalidate a patent, regardless of his or her level of interest.”) To that end, Petitioner has provided Exhibits 1013 and 1014 to corroborate the content of the Declarations of Ms. Kurtz and Dr. Moser, each of which we examine in turn in the context of whether or not the Angus system is prior art. And in that context, we note that neither party disputes that the relevance of Dr. Moser’s Declaration is minimal in this regard, as Dr. Moser’s Declaration, on its face, does not set forth any facts concerning whether or not the Angus system is prior art, deferring such considerations to Ms. Kurtz. *See generally* Ex. 1012; Ex. 2018, 34:17–35:10, 50:21–51:7. Accordingly, our analysis of this issue will be confined to whether or not Exhibits 1013 and 1014 corroborate sufficiently the testimony of Ms. Kurtz concerning whether or not the Angus system is prior art, specifically, her testimony in paragraphs 4 and 6.

We begin with Exhibit 1013. The primary testimony of record concerning any date for Exhibit 1013 is the following: “Attached hereto as Attachment B is a document which includes printouts of an example electronic pedigree available

through Angus’s website (‘Angus 1’). Although these printouts were generated in 2014, I am personally aware that electronic pedigrees having this layout and information-type have been available online via the Angus website since November 25, 2009.” Ex. 1011 ¶ 4. Examining Exhibit 1013 in detail, we note that the only date listed is October 21, 2014, which is after the filing date of the ’888 patent. Accordingly, based on the above, we determine that Exhibit 1013 is weak corroborative evidence of Ms. Kurtz’s testimony that the content of Exhibit 1013 was available since November 25, 2009, or at least prior to the earliest possible priority date listed on the front of the ’888 patent. Ex. 1011 ¶ 4.

In contrast to Exhibit 1013, Exhibit 1014 includes several dates, of which the most relevant are a revision date of March 10, 2010, and an indication that information listed in the document is for “[c]attle to be sold 06/08/2011.” Ms. Kurtz declares, concerning Exhibit 1014, that “[t]he revision date is the date on which Angus, through AngusSource, began providing electronic marketing documents to the public which have the same form, layout, and data as shown in Angus 2. I am personally aware of this fact.” Ex. 1011 ¶ 6. On its face, Exhibit 1014 provides some corroborative evidence that the document and the information it contains was available online at least as early as June 8, 2011, which is before the earliest possible priority date.

When we evaluate Exhibit 1014 in light of all the evidence, however, we determine that its corroborative value is compromised by a variety of factors, to the point where we determine that it does not provide sufficient corroboration for Ms. Kurtz’s testimony that the document and the information it contains was available online at least as early as June 8, 2011. As an initial matter, we find that Exhibit 1014 was generated after every possible priority date. Ex. 2033, 57:7–58:6 (Ms. Kurtz testified, concerning Exhibit 1014, that “[i]t was actually printed last

year is when I sent those to counsel.”) We find further that in attempting to make sense of the dates of the various documents, Ms. Kurtz had to consult the “IS department,” which also weighs against her testimony that she was personally aware that “[t]he revision date is the date on which Angus, through AngusSource, began providing electronic marketing documents to the public which have the same form, layout, and data as shown in Angus 2.” Ex. 1011 ¶ 6; Ex. 2033, 27:14–28:2. We find additionally that changes were made at various times to the website on which Exhibit 1014 resides, and there is no definitive evidence presented in this proceeding as to which changes were made at which time. Ex. 2033, 28:8–31:6, 45:14–17, 46:1–47:7.

To be sure, we find Ms. Kurtz to be credible, in that after reviewing all of the deposition testimony, we find that she was honest and sincere in trying to provide the most accurate information possible. The problem, however, is that her statement in the Declaration at paragraph 6, that she was personally aware that Exhibit 1014 existed in its exact form prior to every effective date, is in conflict with her testimony on cross-examination that she had to consult the IS department concerning the mechanics of the dates printed in Exhibit 1014, and that the format of Exhibit 1014 may have been altered between every possible priority date and the time that Exhibit 1014 was printed.

Accordingly, given the weak corroborative value of Exhibit 1013, and the now-discounted corroborative value of Exhibit 1014, we conclude that Exhibits 1013 and 1014, collectively, do not constitute sufficient evidence to corroborate the Declaration of Ms. Kurtz that the Angus system is prior art.

2. *Analysis*

Each of independent claims 1, 9, and 16 recites “online genetic merit scorecard.” In the relevant portions of the claim charts, Petitioner cites portions of

Wang and the Angus system as corresponding to the recited “online genetic merit scorecard.” Pet. 56–58, 61–65, 68–71; *see also* Pet. Reply 20–21. As set forth above, we determined that Petitioner has not met its burden of showing that the Angus system is prior art. Accordingly, Petitioner must rely on Wang alone for the “online genetic merit scorecard.”

Aside from the Angus system, Petitioner relies on paragraphs 11, 14, and 72 of Wang (Ex. 1004) for disclosing an “online genetic merit scorecard.” Pet. 57–58. We have considered paragraphs 11, 14, and 72 of Wang, and find that while they do provide disclosure that corresponds properly to “genetic merit scorecard,” construed above as “visual display of genetic merit information,” Petitioner has not pointed to any disclosure or provided any analysis, unrelated to the Angus system, concerning the “online” aspect of “online genetic merit scorecard.”

To be sure, at a high level, the fact that the “genetic merit scorecard” may be “online” seems like a relatively minor distinction, especially given that the ’888 patent has an earliest possible priority date of April 13, 2013. Furthermore, it is unclear how much weight should be given to “online,” in that it is possible that any computer output, in a sense, can be considered capable of being placed “online.” Additionally, Wang does provide some disclosure that a computer is connected to databases, and that the computer is used to “generate the output rankings and individual animal estimated breeding values” (Ex. 1004 ¶¶ 11, 14), which could, perhaps, be enough to be considered “online.” Petitioner, however, has not advanced any of the above assertions, nor provided evidence in support thereof. *See* 35 U.S.C. § 326(e) (“In a post-grant review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”) Absent such assertions or evidence, we determine that Petitioner has not met its burden of showing, by a preponderance of

the evidence, that the “online” aspect of “online genetic merit scorecard,” as recited in each of independent claims 1, 9, and 16, is obvious in view of Wang alone.¹⁰

3. Conclusion

For the foregoing reasons, we are unpersuaded that Petitioner has shown, by a preponderance of the evidence, that claims 1–4 and 6–20 are obvious in view of Wang and the Angus system.

C. Dependent Claim 5 as Obvious over Wang, the Angus System, and Goddard

Petitioner contends that dependent claim 5 is obvious over Wang, the Angus system, and Goddard. Pet. 77–79 (citing Exs. 1004, 1015, 1016). Patent Owner disagrees. PO Resp. 65 (citing Exs. 1015). Specifically, Patent Owner asserts that Goddard is cited by Petitioner for reasons unrelated to the aforementioned deficiencies of independent claim 1, from which claim 5 depends, and, thus, cannot be used to remedy that deficiency. We agree. For the foregoing reasons, we are unpersuaded that Petitioner has shown, by a preponderance of the evidence, that claim 5 is obvious in view of Wang, the Angus system, and Goddard.

D. Claims 1–20 as Failing to Recite Statutory Subject Matter

Petitioner contends that claims 1–20 fail to recite statutory subject matter under 35 U.S.C. § 101. Pet. 30–39 (citing Exs. 1001, 1006, 1008, 1016). Patent Owner disagrees. PO Resp. 65–75 (citing Exs. 1001, 2002, 2003, 2018, 2022,

¹⁰ Indeed, we note additionally that this analysis appears to be consistent with the prosecution history of the ’888 patent, in which the Examiner noted, with respect to rejection of independent claim 1, that “Wang fail[s] to disclose displaying a genetic merit scorecard and to display to a user thereof one or more online genetic merit scorecards.” Ex. 1003, 6.

2034). Petitioner replies. Pet. Reply 9–13 (citing Exs. 1001). Claims 1, 9, and 16 are independent.

1. Relevant Law

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

In determining whether a claim falls within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court’s two-step framework, described in *Alice*, 134 S. Ct. at 2355, and *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012). In accordance with that framework, we first determine whether the claim is “directed to” a patent-ineligible abstract idea. *See Alice*, 134 S. Ct. at 2356 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2009) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk”); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (“Analyzing respondents’ claims according to the above statements from our cases, we think that a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter.”); *Parker v. Flook*, 437 U.S. 584, 594–95 (1978) (“Respondent’s application simply provides a new and presumably better method for calculating alarm limit values.”); *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972) (“They

claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.”).

The patent-ineligible side of the spectrum includes fundamental economic practices, *Alice*, 134 S. Ct. at 2357, *Bilski*, 130 S. Ct. at 3231; mathematical formulas, *Flook*, 437 U.S. at 594–95; and basic tools of scientific and technological work, *Benson*, 409 U.S. at 69. On the patent-eligible side of the spectrum are physical and chemical processes, such as curing rubber, *Diamond*, 450 U.S. at 184, “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores,” and a process for manufacturing flour, *Gottschalk*, 409 U.S. at 69 (internal citations omitted).

If the claim is “directed to” a patent-ineligible abstract idea, we then consider the elements of the claim—both individually and as an ordered combination—to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Alice*, 134 S. Ct. at 2355. This is a search for an “inventive concept”—an element or combination of elements sufficient to ensure that the claim amounts to “significantly more” than the abstract idea itself. *Id.*

2. *Whether Claims 1–20 Recite an Abstract Idea*

Petitioner asserts that independent claims 1, 9, and 16 are directed to the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits,” and that such a fundamental concept is a patent ineligible abstract idea. Pet. 31–34. Specifically, Petitioner asserts the following:

Peeling back the flowery language of claims 1, 9, and 16, these claims essentially call for: (1) accepting inputted information regarding animal characteristics (or “genetic merit estimates”), (2) running a set of predetermined mathematical formulas using the inputted animal characteristics information to determine a monetary value of the animal, and (3) outputting the result of such formulas, including a

ranking of certain of the animal's characteristics. These steps capture the fundamental principle of determining an animal's relative economic value based on its genetic and physical traits. (Spangler Dec., ¶ 54.)

For centuries, farmers have judged the value of animals based on their physical traits and parentage. (Id. at ¶ 55.) Many decades ago, farmers began measuring the traits of animals and recording the collected data. (Id.) By creating algorithms for determining the relative value of animals based on the various measured traits, experts in this area long ago developed better valuation and breeding practices. (Id.) This concept is so fundamental and prevalent in today's market as to have become ubiquitous in the cattle industry. (Id.)

Pet. 31–32. Petitioner asserts further that none of dependent claims 2–8, 10–15, and 17–20 set forth any limitations that require deviation from the aforementioned fundamental concept.

Patent Owner counters with the following:

The claimed invention is directed to **analyzing and measuring the market potential (including market value and ranking) of a sale group of feeder calves (actual calves to be sold), based on information obtained from disparate sources, and transforming these results into dynamically-generated scorecards available on demand by users interested in purchasing the sale group.** (E.g., Ex. 1001, Abstract, 2:4-44.) Importantly, by dynamically generating these scorecards, the relative market value can be personalized to the user based on each individual's unique circumstances. (Ex. 2022, ¶ 71.) The Board stated in its Institution Decision that, based on the record available to it at the time, the '888 Patent was directed to the mere abstract idea of "determining an animal's relative economic value based on its genetic and physical traits." (Paper 19 at 14.) The claimed invention does not preempt anyone from applying this alleged abstract idea. (Ex. 2022, ¶ 71.) Rather, it provides cutting edge technology and a resulting product that has never been available before and is based on a very new approach – a system that provides, through the aggregation of myriad disparate data, a scorecard with an accurate estimation of monetary worth, of actual feeder calves to be sold. (Ex. 2022, ¶ 71.)

PO Resp. 65–66 (emphasis added). In essence, Patent Owner asserts that Petitioner’s proffered fundamental concept is overly generalized, and asks us to modify Petitioner proffered fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits” to include additional words including “sale group of feeder calves,” “disparate sources,” “transforming,” “dynamically,” and “on-demand.” *See also* PO Resp. 69–71. We disagree that such a modification is appropriate, for the reasons set forth below. For purposes of clarity, we will evaluate both Petitioner and Patent Owner’s positions only with respect to independent claim 1, however, a similar analysis is applicable to each of claims 1–20.

Fundamentally, a proper evaluation of Petitioner’s position vis-à-vis Patent Owner’s position should begin with the claims themselves. After consideration of the express language of independent claim 1, we agree with Petitioner that the claims appear to be directed largely to applications of mathematical formulas and algorithms in the field of animal valuation, which would support Petitioner’s proffered fundamental concept argument.

By contrast, independent claim 1 does not recite any of the above words sought to be added by Patent Owner. For example, concerning “dynamically” and “on-demand,” while Patent Owner does identify some claim limitations arguably supporting their positions that the articulated fundamental concept should include “dynamically,” and “on-demand,” we are unpersuaded that any of sale groups include “cattle fed and harvested for beef production,” “genetic merit interface,” determining “relative market value,” or outputting an “online genetic merit scorecard” are related to either “dynamic” or “on-demand” in a manner sufficient to require alteration of the aforementioned fundamental concept. For example, being “dynamic” in this context implies that the output responds automatically to

changes in underlying data. Presumably the underlying data would change based on user input in the “genetic merit interface,” however, independent claim 1 does not provide any indication that any input from the “genetic merit interface” is processed automatically. In another example, being “on-demand” implies that information is displayed at the request of a user. Presumably the outputting of an “online genetic merit scorecard” limitation supports this position, however, we are unable to identify anything in the outputting limitation that indicates displaying any information at the request of a user.

We determine similarly that none of the other terms to be added by Patent Owner are rooted sufficiently in the express claim language, and in any case, are peripheral to the above-identified fundamental concept, in that while they may represent variations of the fundamental concept, we are unpersuaded that they alter materially the fundamental concept itself. For example, being “dynamic,” while perhaps placing some temporal aspects on “determining an animal’s relative economic value based on its genetic and physical traits,” does not alter the fact that independent claim 1 is fundamentally directed to “determining an animal’s relative economic value based on its genetic and physical traits.” A similar analysis is applicable to “sale group of feeder calves,” “disparate sources,” and “transforming.”

The Specification further supports Petitioner’s argument. The “Field of the Invention” section set forth in the ’888 patent reads as follows:

Embodiments of the present invention relate generally to the field of genetic quality and relative market value of livestock. More specifically, embodiments of the present invention facilitate an owner or potential buyer of one or more sale groups of livestock to evaluate the relative market value of the sale groups based on predictions derived from genetic merit estimates of the herd.

Ex. 1001, 1:21–27. The “Description of Related Art” section that follows delves heavily into problems associated with determining what the actual value of the livestock is, and more specifically what premium or discount the livestock should command based on these desired genetic merits. Ex. 1001, 1:46–48. The first three sentences of the “Summary” section then read as follows:

The Applicants recognize the importance of determining relative market value of a sale group or a group of animals offered for sale from a livestock operation. Various embodiments of methods and apparatus for determining relative market value of a sale group are provided herein. Exemplary embodiments of the present invention include an online genetic merit scorecard system.

Ex. 1001, 2:6–12. Based on the above cited portions of the ’888 patent, we determine that the Specification supports heavily Petitioner’s proposed fundamental concept. The unambiguous disclosure in the Specification as to the nature of the invention indicates to us that Petitioner has not over-generalized here.

Given the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits,” we are persuaded by Petitioner’s assertion that this concept is a “fundamental economic practice . . . long prevalent in our system of commerce,” or “a fundamentally necessary and decades old principle,” or a “building block of human ingenuity.” Pet. 32. Our determination is supported by our finding that the “Description of Related Art” is replete with examples of prior attempts at “determining an animal’s relative economic value based on its genetic and physical traits.” *See e.g.*, Ex. 1001, 1:29–2:2. Our determination is supported further by Dr. Spangler’s representation that, among other factors, “valuing an animal based on its physical traits and lineage has been routine for centuries – likely millennia.” Ex. 1016 ¶ 55. Patent Owner challenges the fact that the aforementioned fundamental concept is any of “fundamental economic practice . . . long prevalent in our system of commerce,”

an ““a fundamentally necessary and decades old principle,”” or a ““building block of human ingenuity”” (PO Resp. 67–71), however, Patent Owner’s assertions are misplaced as they are directed to Patent Owner’s proffered narrower fundamental concept, a proffer we do not adopt for the reasons set forth above.

Given all this, we are persuaded that the aforementioned fundamental concept is closely akin to the patent-ineligible abstract ideas of “hedging” found in *Bilski* and “intermediated settlement” found in *Alice*. Thus, we determine that claims 1–20 are directed to a patent-ineligible abstract idea.

3. *Whether Claims 1–20 Recite “Significantly More”*

Given that the claims are directed to an abstract idea, Petitioner asserts that the claims fail to recite an inventive concept that recites “significantly more” so as to transform the otherwise patent-ineligible abstract idea into patentable subject matter. Most significantly, Petitioner asserts that the claims merely recite generic computer hardware that is used in a conventional manner, which has been found in *Alice* and other decisions by our reviewing courts as insufficient to transform an otherwise patent-ineligible abstract idea into patentable subject matter. Pet. 34–39. Patent Owner disagrees for several reasons. PO Resp. 71–75. We agree with Petitioner.

Specifically, we agree with, and are persuaded by, Petitioner’s assertions that all computer recitations in the challenged claims are recitations to generic computer hardware used in a conventional manner, which are insufficient to impart patentability under *Alice*. For example, independent claim 16 recites the following computer hardware: “computer-implemented method”; “one or more processors”; and “electronic interfaces”; “online.” We are unable to ascertain how the claims use these and other items of computer hardware in a manner other than their conventional generic use. For example, the Specification recites the following

concerning the “processor”: “[t]he processor can be any *commercially available* terminal processor, or plurality of terminal processors, adapted for use in or with the computer **41** or system **401**.” Ex. 1001, 29:16–18 (italics added). The balance of the paragraph then continues on to provide a seemingly exhaustive list of processors that are suitable for use in the invention, providing a strong indication that any conventional generic processor is acceptable for use in the claimed invention. *See id.* The Specification then continues on in a similar fashion concerning “computer” and “non-transitory memory,” and discloses the following concerning the Internet: “the graphical user interface 51 can be an Internet website, accessible by a communications network . . . and one or more graphical user interface input components *as known and understood by those skilled in the art.*” Ex. 1001, 31:42–48 (emphasis added). The story is no different for “database” (Ex. 1001, 36:7–17) and “genetic merit interface” (Ex. 1001, 30:38–49). We are unpersuaded that there is any indication, either in the claims or the Specification, that any of the recited computer hardware is used in a manner other than their conventional generic use, and, thus, they are insufficient to impart patentability under *Alice*.

Patent Owner asserts that the claims are confined to not just valuations of animals generally, but feeder calves. Patent Owner’s assertions are misplaced, for as set forth above in our claim construction of “sale group including cattle that are fed and harvested for beef production,” the claims are not restricted to “feeder calves.” Indeed, we note that none of the claims recite either of “feeder” or “calves.”

Patent Owner asserts further that the claims impose the following “significantly more” requirements:

(a) the relative market value of the sale group, as a whole, be determined (unlike Selection Indices which, at best, evaluate individual animals); (b) the relative market value is tailored to each interested buyer based on their own unique circumstances (i.e., the relative market value may change depending on the user); and (c) the sale group must be ranked, such that the user can determine how that sale group may compare to other sale groups (e.g., in terms of certain genetic attributes).

PO Resp. 72–73. However, we are unpersuaded that (a) valuing a group of animals is “significantly more” than valuing a single animal, (b) tailoring a price to a user is “significantly more,” and (c) comparison shopping is “significantly more,” whether taken in succession or as a whole. Indeed, these requirements appear to be routine parts of commerce involving the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits.”

Patent Owner asserts additionally that the claimed invention does not merely recite the alleged abstract idea and say “apply it” on computer components, because the recited computer components are an integral part of rooting the invention in computer technology. Specifically, Patent Owner asserts that the claimed invention involves novel technical software that “transforms genetic and performance information associated with the sale group into a dynamically-generated scorecard available to users on-demand.” PO Resp. 73–74. We disagree, as the recitation of software in the claim, if any at all, is at a highly abstract level, in that the claims recite no more than taking in and outputting data, with no detail as to how that data is manipulated between input and output.¹¹

¹¹ “MR. COHN: Your Honor, the little calculator that’s in Windows is a dynamic calculator. It’s been there for 25, 30 years. You pull it up. You type in five times two and you hit equals and it spits the answer back to you on demand right there.” Tr. 85:24–86:2.

Absent such detail, we are unpersuaded that the claims are reciting any more than “applying to software” the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits,” which is not “significantly more.” As for “dynamically-generated scorecard available to users on-demand,” our analysis of the same in the abstract idea prong of *Alice* is equally applicable here, namely, that we are unpersuaded that “dynamic” and “on-demand” are sufficiently related to the claims.

Patent Owner cites *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) in support of their position, but it is precisely because of the instructive nature of the problem-solution approach in that case that we arrive at our conclusion here. Specifically, *DDR Holdings* held that the “problem of retaining website visitors” involves a “claimed solution [that] is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR Holdings, LLC*, 773 F.3d at 1257. Such is not the case here, where the problem, as clearly articulated above in the aforementioned portions of the Specification, is “determining an animal’s relative economic value based on its genetic and physical traits.” We are unpersuaded that this problem, or its solution, involves or requires anything computer-related.

4. Conclusion

For the foregoing reasons, we conclude that Petitioner has shown, by a preponderance of the evidence, that claims 1–20 fail to recite statutory subject matter, and are, thus, unpatentable, under 35 U.S.C. § 101.

E. Patent Owner’s Motion to Amend

Patent Owner requests, should independent claims 9 and 16 be determined to be unpatentable, cancellation of claims 9–20, and entry of substitute claims 21–28. PO Amend. 1–25 (citing Exs. 1001, 1004, 2002, 2003, 2018, 2022, 2024, 2034,

2045). Petitioner opposes the request. Pet. Resp. 1–25 (citing Exs. 1001, 1017–1019, 1021, 1022, 1025, 1027, 1028). Patent Owner replies. PO Reply 1–12 (citing Exs. 1001, 1019, 2022, 2024, 2049–2054).

1. Procedural Burdens

Patent Owner has the burden of proving patentability of a proposed substitute claim. *See Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1334 (Fed. Cir. 2015) (“[T]he Board permissibly interpreted [37 C.F.R. § 42.20(c)] as imposing the burden of proving patentability of a proposed substitute claim on the movant: the patent owner.”) Accordingly, we determine, at a minimum, that Patent Owner has the burden of showing that (1) the substitute claims overcome all the grounds under which independent claims 9 and 16 were determined to be unpatentable, namely, 35 U.S.C. § 101; and (2) its request meets all the procedural requirements concerning motions to amend set forth in our rules, *Idle Free Systems, Inc. v. Bergstrom, Inc.*, Case IPR2012-00027 (PTAB June 11, 2013) (Paper 26) (informative), and *MasterImage 3D, Inc. v. RealD Inc.*, Case IPR2015-00040 (PTAB July 15, 2015) (Paper 42) (precedential). *See Microsoft Corporation v. Proxyconn, Inc.*, 789 F.3d 1292, 1307 (Fed. Cir. 2015) (opining that “we cannot say that the PTO has abused its discretion in choosing adjudication over rulemaking” in setting forth rules concerning motions to amend).

2. Whether Substitute Claims Are Patentable Under 35 U.S.C. § 101

Patent Owner asserts that substitute independent claims 21 and 26 meet the requirements of reciting statutory subject matter under 35 U.S.C. § 101. PO Amend. 10–15, 19–21; PO Reply 6–9. Specifically, Patent Owner asserts that insofar as there was any ambiguity that independent claims 9 and 16 recite statutory subject matter under either prong of *Alice*, substitute independent claims 21 and 26 remedy those ambiguities. After considering all arguments and

evidence, we are unpersuaded that Patent Owner has met its burden concerning this issue.

Specifically, with regard to substitute independent claim 26, Patent Owner makes a myriad of amendments relative to independent claim 16 to both (1) shift the fundamental concept such that it “addresses an Internet-centric problem necessarily rooted in computer technology,” and (2) recite additional limitations that amount to “significantly more” because they are directed to unconventional steps that confine the purportedly abstract idea to a specific, useful, application. PO Amend. 20–21. We disagree that Patent Owner has met its burden on either account.

Concerning the “abstract idea” prong of *Alice*, we are unpersuaded that the fundamental concept underlying substitute independent claim 26 should be altered from “determining an animal’s relative economic value based on its genetic and physical traits.” Patent Owner’s primary assertion in this regard is the addition of the “broker module,” with the implication that facilitating a sale via this module makes a computer a “necessary” part of the fundamental concept. We disagree.

Specifically, the added limitation in question reads as follows: “one of the genetic merit interfaces including a broker module to facilitate a purchase of the sale group over the communications network by a buyer at the remote user computer in response to receiving the genetic merit scorecard.” When we strike out the computer-related terms, however, we are left with the following paraphrase: “facilitating a purchase of a sale group by a buyer responsive to receiving genetic information.” This is instructive for two reasons. One, even when striking out the computer-related terms, the resulting paraphrase is logical and purposeful. By contrast, the problem and solutions in *DDR Holdings* make no sense when the computer-related terms are removed. Second, the resulting

paraphrase is a natural extension of the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits,” in that the purpose for making such a valuation is to make a sale, i.e., “facilitating a purchase of a sale group by a buyer responsive to receiving genetic information.” Accordingly, the paraphrase informs, and, thus, we are unpersuaded that there is a need to alter, the fundamental concept articulated above. The same can be said for the addition of other asserted differences, such as the specific types of information received; they further inform, and do not alter, the fundamental concept of “determining an animal’s relative economic value based on its genetic and physical traits.”

Concerning the “significantly more” prong of *Alice*, we are unpersuaded that any of the additional recitations of technology are unconventional. For example, going back to the broker module, it recites being directed to “facilitate a purchase of the sale group over the communications network by a buyer at the remote user computer in response to receiving the genetic merit scorecard.” Of course, this requires programming, but the added claim limitation is non-specific as to how any of the “facilitating” and “in response to” occurs; it merely recites an input and a result. Absent more specificity as to how the input arrives at the result, we are unpersuaded that the computer technology that performs the operation is anything more than generic, and, thus, not “significantly more” for the reasons outlined above.

Patent Owner makes similar assertions, as set forth above for substitute independent claim 26, for substitute independent claim 21. They are unpersuasive for the same reasons. Specifically, we are unpersuaded that any of the claim amendments relative to independent claim 9, such as “feeder cattle,” “bulls,” “dams,” and “national market average,” warrant altering the proffered fundamental

concept of “determining an animal’s relative economic value based on its genetic and physical traits.” While “feeder cattle,” “bulls,” “dams,” and “national market average,” may be more specific applications of the proffered fundamental concept, we are unpersuaded that they do not fall under the rubric of “determining an animal’s relative economic value based on its genetic and physical traits,” or recite anything “significantly more.” *See OIP Techs. Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1361–63 (Fed. Cir. 2015); *Graff/Ross Holdings LLP v. Fed. Home Loan Mortg. Corp.*, 892 F. Supp. 2d 190 (D.D.C. 2012), *aff’d per curiam*, 604 Fed. Appx. 930 (Fed. Cir. 2015). For example, “feeder cattle,” “bulls,” and “dams” are all animals, and “national market average” is a basis that can be used to determine a relative economic value. *See also Am. Simmental Ass’n v. Leachman Cattle of Colo., LLC*, Case PGR2015-00005, slip. op at 42–49 (PTAB June 14, 2016) (Paper 52) (analysis of substitute claim 21).

3. *Whether Patent Owner Met Certain Procedural Requirements Concerning Motions to Amend*

Petitioner asserts that Patent Owner did not meet certain procedural requirements, and, thus, asserts that the Motion to Amend should be denied. Pet. Resp. 1–6. While it is unnecessary to opine on all of Petitioner’s assertions, as Patent Owner has not met its burden of showing the patentability of substitute claims 21–28 in view of 35 U.S.C. § 101, we determine that some of Petitioner’s assertions merit discussion.

Petitioner asserts that Patent Owner was too ambitious in the number of substitute claims and claim amendments it pursued, and in doing so, failed to properly construe new claim terms, as required under *Idle Free Systems, Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 7 (PTAB June 11, 2013) (Paper 26) (informative) (“A patent owner should identify specifically the feature or features added to each substitute claim, as compared to the challenged claim it

replaces, and come forward with technical facts and reasoning about those feature(s), including construction of new claim terms, sufficient to persuade the Board that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner.”). For example, Petitioner asserts that “environmental conditions,” as recited in substitute independent claim 26, requires an express construction because while the ’888 patent may literally recite “environmental conditions” (Ex. 1001, 12:58–63), the subsequent discussion in the ’888 patent is to “[e]nvironmental factors like weather, parasites and stress” (Ex. 1001, 12:63–65), and so without an express construction, it is unclear (1) whether “environmental conditions” and “environmental factors” are the same, and (2) whether the scope of “environmental conditions” is limited to “weather, parasites and stress,” and if not, what additional conditions are included. We disagree with Petitioner that Patent Owner’s Motion to Amend should be denied because Patent Owner did not provide an express construction of “environmental conditions.” As identified by Patent Owner, the ’888 patent recites expressly “environmental conditions,” and while the subsequent discussion in the ’888 patent does use the word “factor” instead of “condition,” we are persuaded that the proximity of terms and the open-ended nature of the discussion indicates sufficiently that “environmental conditions” includes but is not limited to “weather, parasites and stress,” and that such a construction would have been apparent to one of ordinary skill, even without an express construction by Patent Owner.

Furthermore, substitute independent claim 26 is proposed as a substitute for independent claim 16. Independent claim 16 recites “*the online genetic merit scorecard* including the relative market value and one or more rankings of genetic merits of the sale group *being displayed* on the one or more genetic merit

interfaces.” Emphases added. This requirement of displaying the online genetic merit scorecard is not recited in substitute independent claim 26. 35 U.S.C. § 326(d)(3) reads “[a]n amendment under this subsection may not enlarge the scope of the claims of the patent or introduce new matter.” While we acknowledge that, in certain cases, removal of some claim language and addition of other claim language may, in the aggregate, result in a narrower claim, the natural inference is that removal of claim language is broadening. *In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997) (“For example, a reissue claim that deletes a limitation or element from the patent claims is broader in that limitation’s aspect.”). Thus, it was incumbent on Patent Owner to explain the justification for the removal of the claim language in light of 35 U.S.C. § 326(d)(3), which was not done here.

4. *Conclusion*

For the foregoing reasons, we conclude that Patent Owner has not met its burden of showing that substitute claims 21–28 are patentable.

F. *Patent Owner’s Motion to Exclude*

Patent Owner seeks to exclude (1) Exhibits 1013 and 1014, and (2) Exhibits 1022, 1026, 1027, and 1028. PO Mot. 1–15; PO Mot. Reply 1–5. For Exhibits 1013 and 1014, Patent Owner’s assertions appear to go more to the weight to be given the Exhibits as opposed to their admissibility. In any case, even when Exhibits 1013 and 1014 were considered, we determined above that Petitioner had not met its burden of showing that the Angus system was prior art. Accordingly, Patent Owner’s request is dismissed as moot.

For Exhibits 1022, 1026, 1027, and 1028, the Board did not rely on any of these Exhibits in rendering its determinations. Accordingly, Patent Owner’s request here is also dismissed as moot.

III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–20 of the '888 patent are unpatentable. Patent Owner's Motion to Amend is *denied*. Patent Owner's Motion to Exclude is *dismissed* as moot.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–20 of the '888 patent are held unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Amend is *denied*;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed* as moot; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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