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Paper 66
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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LIBERTY MUTUAL INSURANCE CO.
Petitioner

v.

PROGRESSIVE CASUALTY INSURANCE CO.
Patent Owner

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Case CBM2012-00002
Patent 6,064,970

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Before JAMESON LEE, JONI Y. CHANG, and MICHAEL R. ZECHER, *Administrative Patent Judges*.

CHANG, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Liberty Mutual Insurance Company ("Liberty") filed a petition on September 16, 2012, requesting a covered business method patent review of U.S. Patent No. 6,064,970 ("the '970 patent") pursuant to section 18(a) of the Leahy-Smith America Invents Act ("AIA").[1] Paper 1 ("Pet."). Progressive Casualty Insurance Company ("Progressive") filed a patent owner preliminary response. Paper 8 ("Prelim. Resp."). Taking into account Progressive's preliminary response, the Board determined that the information presented in Liberty's petition demonstrated that it was more likely than not that the challenged claims are unpatentable. Pursuant to 35 U.S.C. § 324, the Board instituted this trial on January 25, 2013, as to claims 1, 3-6, and 9-18 of the '970 patent. Paper 10 ("Dec.").

During the trial, Progressive filed a patent owner response (Paper 27, "PO Resp."), and Liberty filed a reply to the patent owner response (Paper 33, "Reply"). An oral hearing was held on October 21, 2013.[2]

The Board has jurisdiction under 35 U.S.C. § 6(c). This decision is a final written decision under 35 U.S.C. § 328(a) as to the patentability of claims 1, 3-6, and 9-18 of the '970 patent. We hold that claims 1, 3-6, and 9-18 of the '970 patent are unpatentable under 35 U.S.C. § 103(a).

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[1] Pub. L. 112-29, 125 Stat. 284, 329 (2011).

[2] The oral arguments for the instant trial and for CBM2012-0004 were merged and conducted at the same time. A transcript of the oral hearing is included in the record as Paper 64 ("Tr.").

### *A. Related Proceedings*

Liberty indicates that the '970 patent was asserted against it in *Progressive Casualty Ins. Co. v. Safeco Ins. Co. of Ill.*, No. 1:10-cv-01370 (N.D. Ohio). Pet. 5. The '970 patent also is subject to a covered business method patent review in CBM2012-00004. A final written decision in CBM2012-00004 is entered concurrently with this decision.

### *B. The '970 Patent*

The '970 patent relates to a method for determining an automobile insurance premium based on data collected from monitored motor vehicle operational characteristics and operator's driving characteristics. Ex. 1001, Abs.; 3:61-66. The method assesses vehicle usage by collecting and recording monitored vehicle data, such as miles driven, types of roads driven, speeds driven, rate of acceleration, and rate of braking. *Id*. at 4:27-29; 6:29-43. According to the '970 patent, the method determines insurance costs more precisely and fairly, because new actuarial classes generated based on actual usage of the vehicle and driver behavior are better predictors of loss. *Id*. at 4:27-29; 4:53-56.

Claims 1, 4-6, and 18 are independent. Claim 3 depends directly from claim 1; claims 9-15 depend ultimately from claim 6; and claims 16 and 17 depend directly from claim 5. Claim 4, reproduced below, is illustrative of the claimed subject matter of the '970 patent.

> 4. A method of insuring a vehicle operator for a selected period based upon operator driving characteristics during the period, comprising, steps of:
>
> generating an initial operator profile;
>
> generating an insured profile for the vehicle operator prior to any monitoring of any of the vehicle operator's driving characteristics wherein the insured profile comprises coverage information, including limits and deductibles, for determining a base cost of vehicle insurance for the vehicle operator;
>
> monitoring the vehicle operator's driving characteristics during the selected period; and
>
> deciding a total cost of vehicle insurance for the selected period based upon the vehicle operator's driving characteristics monitored in that selected period and the base cost of insurance.[3]

### *C. Covered Business Method Patent*

Upon consideration of Liberty's contentions in the petition and Progressive's arguments in the preliminary response, the Board, in the Decision on Institution, determined that the '970 patent is a covered business method patent as defined in section 18(a)(1)(E) of the AIA and 37 C.F.R. § 42.301, because at least one claim of the '970 patent is directed to a covered business method. Dec. 3-8. Accordingly, the Board concluded that the '970 patent is eligible for a covered business method patent review. *Id*.

In its patent owner response, Progressive argues that the Board must conduct a claim-by-claim analysis and determine that every challenged

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[3] Ex. 1001, Reexam. Cert., 1:50-65 (original emphases and bracketed matters omitted).

claim is directed to a covered business method, before it is authorized, under section 18(a)(1)(E) of the AIA, to review all of the challenged claims. PO Resp. 2-3, n.1. Progressive asserts that the Board exceeded its "statutory authority to institute review of any patent claim which the Board has not determined to be directed to a covered business method." *Id*.

Progressive's argument is based on an erroneous statutory construction that interprets the word "patent" in the statutory provision on what is subject to review as "claim." We decline to adopt such an interpretation.

As in any statutory construction analysis, we begin with the language of the statute. *In re Swanson*, 540 F.3d 1368, 1374-75 (Fed. Cir. 2008); *Duncan v. Walker*, 533 U.S. 167, 172 (2001); *Crandon v. United States*, 494 U.S. 152, 158 (1990). "In the absence of a clearly expressed legislative intention to the contrary, the language of the statute itself must ordinarily be regarded as conclusive." *United States v. James*, 478 U.S. 597, 606 (1986) (internal quotation marks and citations omitted). "It is well settled law that the plain and unambiguous meaning of the words used by Congress prevails in the absence of a clearly expressed legislative intent to the contrary." *Hoechst AG v. Quigg*, 917 F.2d 522, 526 (Fed. Cir. 1990).

Section 18(d)(1) of the AIA defines the term "covered business method patent" to mean (emphases added):

> [A] *patent* that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product

> or service, except that the term does not include *patents* for technological inventions.

If Congress intended to limit the availability of the covered business method patent review on a claim-by-claim basis, as urged by Progressive, it could have used the term "claim" rather than "patent." Notably, when specifying the subject matter for review, Congress could have used the language "a *claim* that is directed to a method or corresponding apparatus" rather than "a *patent* that claims a method or corresponding apparatus." Section 18(d)(1) of the AIA sets forth a single threshold based on just one claim—the satisfaction of which qualifies an entire patent as eligible for review—rather than a test that must be applied on a claim-by-claim basis to justify review of each claim.[4] Therefore, a *patent* is eligible for a covered business method patent review if the subject matter of at least one claim is directed to a covered business method. Nothing in the legislative history, or other parts of the AIA, requires us to deviate from the plain meaning of the definition set forth in section 18(d)(1) of the AIA, as proposed by Progressive. Moreover, Progressive has not identified any statutory provision or legislative history that requires "each" claim for which trial is instituted to meet the test for a covered business method patent.

Further, Progressive provides no meaningful explanation as to why the Board's analysis—e.g., "[d]etermining a cost of vehicle insurance is a

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[4] *See also* Transitional Program for Covered Business Method Patents – Definitions of Covered Business Method Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48734, 48736 (Aug. 14, 2012).

financial problem rather than a technical problem" (Dec. 8)—was incorrect. PO Resp. 2-3, n. 1.

For the foregoing reasons, we disagree with Progressive that the Board exceeded its statutory authority to institute a covered business method patent review as to claims 1, 3, 5-6, and 9-18 of the '970 patent.

### *D. Prior Art Relied Upon*

Liberty relies upon the following prior art references:

| | | | |
|---|---|---|---|
| Kosaka | JP H4/182868 | June 30, 1992 | (Ex. 1004) |
| Herrod | GB 2 286 369 A | Aug. 16, 1995 | (Ex. 1007) |

FLA. DEPT. OF INS., 1988 Automobile Insurance Shoppers' Guide (1988) ("Florida Guide") (Ex. 1005)

N.Y. STATE INS. DEPT., 1995 Consumers Guide on Automobile Insurance (Downstate) (1995) ("New York Guide") (Ex. 1006)

*An Interest in Black Magic – Motor Technology*, INS. AGE (Jan. 1, 1994) ("Black Magic") (Ex. 1008)

### *E. Grounds of Unpatentability*

The Board instituted the instant covered business method patent review based on the following grounds of unpatentability:

| **Claims** | **Basis** | **References** |
|---|---|---|
| 4, 5, 16, and 17 | § 103 | Kosaka and Florida Guide |
| 1, 3, 11, 12, 14, and 15 | § 103 | Kosaka, Black Magic, and Herrod |
| 6, 9, 10, 13, and 18 | § 103 | Kosaka and Herrod |

## II. ANALYSIS

### *A. Claim Construction*

In a covered business method patent review, claim terms are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.300(b). 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). In that regard, we must be careful not to read limitations from 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).

#### *1. "actuarial class" (claims 1, 3, 6, 9-15, and 18)*

Claim 1 recites "generating [actuarial] classes of insurance, which group operators or vehicles having a similar risk characteristic." Liberty proposes that the claim term "actuarial class" should be construed as "a combination/group/groupings related to loss/risk/safety which are determined from classifications/characteristics representative of motor vehicle operational characteristics and driver behavior for which data is gathered." Pet. 21-22 (citing Ex. 1003, 937-38). Progressive counters that the claim term should be construed as "a grouping of risks (*i.e.*, insureds) with similar risk characteristics and expected insurance claims loss (or insurance costs)." PO Resp. 12; *see also id*. at 9-13. Progressive argues that

its proposed construction is consistent with the specification and the understanding of one of ordinary skill in the art. *Id*. at 9-10 (citing Ex. 1001, 4:52-54 ("new and more precise actuarial classes are considered to be better predictors of loss because they are based on actual use of the vehicle and the behaviors demonstrated by the driver.")).

Although we agree with Progressive that, in light of the specification and in the context of vehicle insurance, actuarial classes are generated based on expected loss, we are not persuaded that the construction proposed by either Liberty or Progressive is the broadest reasonable interpretation of the claim term "actuarial class." The phrases that contain the "/" symbol in Liberty's proposed construction are subject to multiple interpretations, which cause confusion. For instance, replacing "/" symbol with the word "or" would render the construction too broad, and replacing "/" symbol with the word "and" would render the construction too narrow. Further, as acknowledged by Liberty during the oral hearing, "a combination/ group/groupings" may simply be read as "grouping." Tr. 79:9-80:6.

On the other hand, Progressive's proposed construction would render the claim limitation "having a similar risk characteristic" recited in claim 1 insignificant, if not wholly superfluous. Progressive's proposed construction also would redefine the term "risks" as "insureds" to exclude a grouping of vehicles. Such an interpretation would be inconsistent with the claim language "generating [actuarial] classes of insurance, which group operators or vehicles," and inconsistent with the specification of the '970 patent. *See, e.g.*, Ex. 1001, 1:28-35 (the "current system of insurance creates

groupings of vehicles and drivers (actuarial classes) based on the following types of classifications. Vehicle: Age, manufacturer, model; and value."); *id*. at 4:30-52 ("Examples of possible actuarial classes developed from vehicle provided data.")

Progressive, through its arguments regarding the asserted grounds of unpatentability based in part on Herrod, attempts to import limitations into the construction of the claim term "actuarial class"—requiring *homogeneity* as pertaining to acceleration data from different *locations*, and the risk characteristics of all drivers resident in the *household*. PO Resp. 25-33. We decline to accept those additional requirements as part of the broadest reasonable interpretation, because it would import limitations into the claims, and it would be inconsistent with the specification of the '970 patent. For instance, some of the actuarial classes provided in the specification are based on data that are not associated with any location or household—e.g., "driving time in minutes by each driver of the insured vehicle," "number of minutes driving at high/low risk times," and "number of sudden acceleration situations." Ex. 1001, 4:30-52. It is well established that if a feature is not necessary to give meaning to what the inventor means by a claim term, it would be "extraneous" and should not be read into the claim. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998); *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co*., 849 F.2d 1430, 1433 (Fed. Cir. 1988).

Moreover, we decline to import those limitations into the claims in absence of a special definition set forth in the specification. An inventor

may rebut the presumption that a claim term be given its ordinary meaning by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Here, the parties have not alleged that the inventor of the '970 patent acted as his own lexicographer and provided a special definition in the specification for the claim term "actuarial class" that is different from its recognized meaning to one with ordinary skill.

In light of the claims and specification of the '970 patent, we construe the claim term "actuarial class" broadly, but reasonably, as "a grouping related to expected loss, which is determined from motor vehicle characteristics or driving characteristics."

*2. "initial operator profile" (claim 4)*

Liberty proposes to construe the claim term "initial operator profile" as "initial files or information with respect to the operator or the insuring thereof." Pet. 21 (citing Ex. 1003, 756). Progressive counters that Liberty's proposed construction is overly broad and fails to give meaning to the word "profile." PO Resp. 13-14. According to Progressive, the claim term should be construed as "an initial collection of actual driving data associated with a driver that distinguishes that driver from other drivers and is related to insurance." *Id.*

We note that the specification of the '970 patent does not assign or suggest a particular definition for the term "initial operator profile." In fact, that claim term, in its entirety, does not appear in the specification other than

in the claims. Progressive cites, instead, to a discussion of "operator profiles" in the specification (*id*):

> It is yet another object of the present invention to generate actuarial classes and *operator profiles* relative thereto based upon actual driving characteristics of the vehicle and driver, as represented by the monitored and recorded data elements for providing a more knowledgeable, enhanced insurance rating precision.

Ex. 1001, 5:28-33 (emphasis added).

The plain and ordinary meaning of the term "profile" is "a set of characteristics or qualities that identify a type or category of person or thing."[5] Nothing in the specification or the plain and ordinary meaning of the term "profile" precludes two drivers having the same initial operator profile. Therefore, we decline to import the limitation "that distinguishes that driver from other drivers" into the claims, as suggested by Progressive. *See Renishaw*, 158 F.3d at 1249.

In the light of the specification, we construe the claim term "initial operator profile" broadly, but reasonably, as "an initial collection of information associated with an operator that is related to motor vehicle characteristics or driving characteristics."

*3. "insured profile" (claim 4)*

Claim 4 recites "wherein the *insured profile* comprises coverage information, including limits and deductibles, *for determining a base cost of*

[5] RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY 1053 (9th ed. 1999).

*vehicle insurance for the vehicle operator*." Claim 5 recites "determining an *initial insured profile* for the operator of the vehicle prior to any monitoring of any data elements representative of an operating state of the vehicle or an action of the operator of the vehicle."

Liberty proposes to construe the claim term "initial insured profile" the same as "initial operator profile" to mean "initial files or information with respect to the operator or the insuring thereof." Pet. 20 (citing Ex. 1003, 756). Although both terms are similar, we nevertheless decline to give two different claim terms the same construction. *See 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] different terms in the claims connotes different meanings.").

Progressive argues that the claim term "insured profile" should be construed as "basic insurance information pertaining to the insured *from which an initial insurance cost is determined*." PO Resp. 14 (emphasis added). Progressive's proposed construction, however, would render the claim limitation "for determining a base cost of vehicle insurance" recited in claim 4, and the word "initial" in the claim term "*initial* insured profile" recited in claim 5 insignificant, if not wholly superfluous.

Consistent with the language of claim 4, the specification of the '970 patent provides: "This insured profile includes the information about [insurance] coverages including limits and deductibles, which are necessary for establishing the appropriate cost of insurance of the subject insured." Ex. 1001, 10:36-39.

In the light of the claims and specification, we construe the claim term "insured profile" broadly, but reasonably, as "insurance information pertaining to the insured and the insured vehicle," which includes, for example, insurance coverage information, such as limits and deductibles.

*4. "cost of insurance" and "base cost of insurance" (claims 1, 4, and 5)*

Liberty contends that the claim term "cost of insurance" should be construed as "a/one or more or all cost(s) associated with insurance of the vehicle, including, but not limited to, a cost to the insured and/or insurer/underwriter associated with the insurance." Pet. 22 (citing Ex. 1003, 758-61). On the other hand, Progressive argues that, in the context of the claim, the word "cost" refers to the *insured's* cost (i.e., the premium), and not the *insurer's* cost. PO Resp. 14-15. We agree with Progressive, as such a construction would be more consistent with the specification and claims of the '970 patent.

The specification of the '970 patent provides that "the following information would produce a unique *vehicle insurance cost*. . . . A change to any of this information would result in a different *premium* being charged, if the change resulted in a different actuarial class for that variable." Ex. 1001, 1:56-2:16 (emphases added). Claim 5 recites "identifying a surcharge or discount to be applied to the base cost [of vehicle insurance]," and "producing a final cost of vehicle insurance for the selected period from the base cost and the surcharge or discount." In the context of the specification and claims, "cost of insurance" is the premium paid by the policyholder for

the insurance coverage. The plain and ordinary meaning of the term "premium" is the amount paid in installment by a policyholder for coverage under a contract.[6]

Therefore, in light of the specification and claims, we construe the claim term "cost of insurance" as "the amount paid or to be paid by the policyholder for insurance coverage of a selected time period under the policy contract." Similarly, in the light of the specification, *see*, *e.g.*, Ex. 1001, Abs., we construe the claim term "base cost of insurance" as "the *initial* amount paid or to be paid by the policyholder for insurance coverage under the policy contract, during a time period, before any surcharge or bonus is applied."

*5. "safety standard" (claims 5, 10, 11, 13, 14, and 16-18)*

Liberty proposes that the claim term "safety standard" be construed as "value/criteria associated with the promotion of safety/prevention of risk/loss/injury." Pet. 22 (citing Ex. 1003, 761). Progressive does not dispute Liberty's proposed construction. The specification of the '970 patent does not provide a special definition.

The ordinary meaning of the claim term "safety standard" includes a measure or criterion of exemption from injury, danger, or loss.[7] In the context of the vehicle insurance, Liberty's proposed interpretation is broad,

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[6] RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY 1041 (9th ed. 1999).

[7] RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY 1157 (9th ed. 1999).

consistent with that ordinary meaning, and consistent with the specification as it would be understood by one of ordinary skill in the art. *See, e.g.*, Ex. 1001, 8:44-46 ("Select[ed] ones of the plurality of data elements are recorded when the ones are determined to have an identified relationship to the safety standards.").

We, therefore, adopt Liberty's proffered construction as the broadest reasonable construction consistent with the specification. But we further clarify that the "/" symbol should be replaced with the word "or"—"value or criteria associated with the promotion of safety or prevention of risk, loss, or injury."

### *B. The Level of Ordinary Skill in the Art*

On the record before us, the evidence shows that the level of ordinary skill in the art is high.[8] We also note that a hypothetical person of ordinary skill in the art possesses ordinary skill both in the determination of insurance premiums and in telematics. PO. Resp. 20-22. Notably, conventional insurance schemes that use *actuarial classes* to determine vehicle insurance

[8] For instance, Liberty submits that a person of ordinary skill in the art as to insurance pricing would have at least a Bachelor of Science ("B.S.") in Mathematics, or equivalent, with at least five years of experience in the insurance industry setting premiums for auto insurance, and as an associate in the Casualty Actuarial Society. Ex. 1009 ¶ 17. Liberty also provides that a person of ordinary skill in the art as to telematics data would have at least a B.S. degree in electrical engineering, computer engineering, computer science, or the equivalent thereof, and at least one to two years of experience with vehicle telematics systems. Ex. 1012 ¶ 17.

costs were well known in the art at the time of the invention. *See, e.g.*, Prelim. Resp. 13-14; 39; PO Resp. 22 (stating one of ordinary skill in the art "would have had knowledge of multi-variant analysis of risk classifications . . . [and] actuarial standards applicable to risk classification systems").

We agree with Progressive that the Florida Guide and New York Guide, cited by Liberty, reflect conventional or basic knowledge of one with ordinary skill in the art, and include the conventional insurance determination methods disclosed in the background section of the '970 patent. Prelim. Resp. 13-14 (stating the Florida and New York Guides "discuss the same subject matter (*i.e.*, the existence of traditional actuarial classes) that . . . is disclosed in the background section of the '970 patent"); *id.* at 39 (stating the cited portions of the Florida Guide are "essentially identical to the prior art knowledge disclosed in columns 1 and 2 of the '970 patent"). We conclude that the background section of the '970 patent (Ex. 1001, 1:17-2:37) reflects the level of ordinary skill in the art. Therefore, one with ordinary skill in the art would have had a thorough understanding of using the principle of *actuarial classes* to determine vehicle insurance costs.

The '970 patent also indicates that the electronic motor vehicle control and operating systems were known in the art at the time of invention, and those systems could be modified readily to obtain the desired types of information relevant to determine the cost of insurance. Ex. 1001, 3:25-28. Indeed, Liberty's expert, Mr. Scott Andrew, testifies that "several companies had developed vehicle telematics systems that measured vehicle data, such

as speed, acceleration, time of day, etc.," and these "systems commonly included in-vehicle data monitoring devices that would monitor the data, store it, and/or transmit it to a remote location outside of the vehicle." Ex. 1012 ¶ 20. As noted in the '970 patent, vehicle tracking systems—those that used communication links with satellite navigation systems for providing information describing a vehicle's location based upon navigation signals—were also well known in the art. Ex. 1001, 3:28-32. The '970 patent further provides that it was known in the art to detect and record seatbelt usage to assist in determination of the vehicle insurance costs. Ex. 1001, 2:66-3:2 (citing U.S. Patent No. 4,667,336, Abs. ("a system for detecting and recording each time a seat belt is used [and depending] on the level of seat belt usage the driver earns discounts on car insurance premiums.")). Therefore, one with ordinary skill in the art would have possessed the knowledge of determining insurance premiums using monitored vehicle data.

In determining the knowledge level of one with ordinary skill in the art, we note that various factors may be considered, including "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). We also recognize that the knowledge of one with ordinary skill in the art would have included the basic principles, standards, and practices of insurance premium

determination—e.g., Risk Classification Statement of Principles of the American Academy of Actuaries (Ex. 2012), Actuarial Standard of Practice No. 12, Concerning Risk Classification, issued by the Actuarial Standards Board (Ex. 2020), Interpretative Opinion 3: Professional Communications of Actuaries and Interpretative Opinion 4: Actuarial Principles and Practices (Ex. 1023). Ex. 2010 ¶ 16; Ex. 2020 ¶ 5.

### *C. Principles of Law*

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles. We also recognize that prior art references must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *Paulsen*, 30 F.3d at 1480. Moreover, "it is proper to take into account not only specific teachings of the reference but also the

inferences which one skilled in the art would reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826 (CCPA 1968). That is because an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418; *see also Translogic*, 504 F.3d at 1259.

### *D. Claims 4, 5, 16, and 17*

Liberty asserts that claims 4, 5, 16, and 17 are unpatentable under 35 U.S.C. § 103(a) over the combination of Kosaka and Florida Guide. Pet. 28, 41-51, 65, 66. In support of that asserted ground of unpatentability, Liberty provides explanations as to how each claim limitation is met by the combination of the cited prior art references and a rationale for combining the references. *Id*. Liberty also submits declarations of Ms. Mary L. O'Neil (Ex. 1009) and Mr. Andrews (Ex. 1012) to support its positions.

Upon review of Liberty's petition and supporting evidence, as well as Progressive's response and supporting evidence, we determine that Liberty has demonstrated, by a preponderance of the evidence, that claims 4, 5, 16, and 17 are unpatentable over the combination of Kosaka and Florida Guide.

#### *1. Florida Guide*

The Florida Guide is an automobile insurance shoppers' guide that is designed to help insurance policyholders control the cost associated with

automobile insurance. Ex. 1008, 2.[9] According to the Florida Guide, all drivers in the state of Florida must carry a minimum amount of property damage liability coverage in addition to the required personal injury protection coverage. *Id.* at 3. The cost of auto insurance for the policyholder may vary, based on factors such as the type of coverage the policyholder selects, the liability limits and deductibles, and the resident location of the policyholder's car. *Id.* at 11, 13. For example, if the policyholder selects a high liability limit and a low deductible, the auto insurance premium is likely to be higher. *Id.* at 11. Different premiums are charged in different areas because of variation in frequency of accidents, medical expenses, and repair cost. *Id.* at 13.

*2. Kosaka*

Kosaka discloses an insurance premium determination device that increases or decreases insurance premiums by determining premium changes continually "through the detection of [vehicle and driver] states that lead to risk in the insurance customer." Ex. 1004, p. 2; col. 1:54-col. 2:3; col. 2:43-52.[10] Kosaka's insurance premium determination device employs a risk evaluation device for evaluating risk associated with the vehicle and driver.

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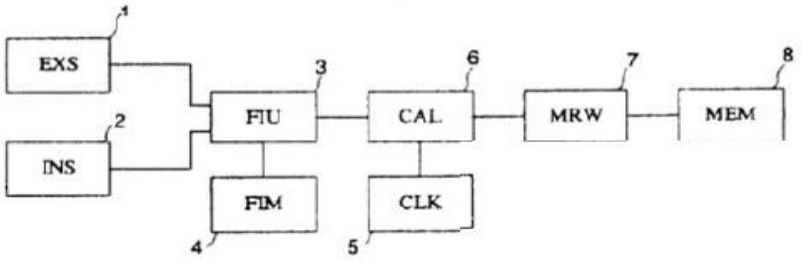
[9] All references to the page numbers in Florida Guide refer to the original page numbers in the bottom, right corner.

[10] Kosaka is a Japanese Patent Application Publication. The citations to Kosaka are to the Certified English-Language Translation provided by Liberty in Exhibit 1004. All references to the page numbers in Kosaka refer to those numbers that appear on the top center of each page.

It also "allows risk evaluations that change from hour to hour during travel to be reflected in the insurance premium." *Id*. at p. 7, col. 2:23-25.

Figure 1 of Kosaka, reproduced below, illustrates one of Kosaka's embodiments directed to an insurance premium determination system:




As shown in Figure 1, external sensor 1 and internal sensor 2 detect the states of the driver and vehicle that contribute to risk (e.g., excessive speed). *Id*. at p. 3, col. 1:4-18; p. 4, col. 2:4-17. Fuzzy logic part 3 evaluates risk based on the detected states of the driver and vehicle. *Id*. at p. 3, col. 2:23-30; p. 4, col. 2:18-20. Specifically, the outputs from sensors 1 and 2 are used as input values to fuzzy logic part 3. *Id*. at p. 4, col. 2:18-19. Risk evaluation values determined by the fuzzy logic may be stored in fuzzy memory 4. *Id*. at p. 4, col. 2:24-26. The detection, by sensors 1 and 2 of the states that contribute to risk, and the evaluation of risk by fuzzy logic 3, both are carried out in real-time. *Id*. at p. 4, col. 1:30-34.

Kosaka's system also includes premium calculation part 6 that uses the risk evaluation values to determine insurance premiums. *Id*. at p. 4, col. 2:26-30. Premium calculation part 6 performs temporal integration and computation of risk evaluation values, and calculates insurance premiums. *Id*. System 5 is connected to premium calculation part 6 to perform time

integration. *Id*. at p. 4, col. 2:31-33. A determination of the premium also is performed in real-time. *Id*. at p. 4, col. 1:30-34. Kosaka's system further includes: (1) output interface 7 that has an electronic currency transfer request means or a prepayment amount erasing means; and (2) monetary amount file part 8 that stores prepayment balance. *Id*. at p. 4, col. 2:33-38.

*3. Discussion*

Based on our review of Liberty's petition and supporting evidence, we determine that Liberty has provided sufficient evidence to show that the combination of Kosaka and Florida Guide renders obvious each claim limitation of claims 4, 5, 16, and 17.

Claim 4 recites "generating an *initial operator profile*." Further, claims 4, 5, 16, and 17 each require the determination of a *base cost of insurance*. As discussed above, we construe the claim term "initial operator profile" broadly, but reasonably, as "an initial collection of information associated with an operator that is related to motor vehicle characteristics or driving characteristics." As to the claim term "base cost of insurance," we construe it as "the *initial* amount paid or to be paid by the policyholder for insurance coverage under the policy contract, during a time period, before any surcharge or bonus is applied."

In its petition, Liberty asserts that Florida Guide, in combination with Kosaka, discloses that "the cost to a driver for auto insurance will depend on an initial collection (profile) of information about the insured driver, including the driver's selected coverage limits and deductibles, together with

other profile information about the driver." Pet. 44 (citing Ex. 1005, 3, 6, 11, 12).

Liberty further asserts that the combination of Kosaka and Florida Guide discloses determining a *base cost of vehicle insurance* for the vehicle operator, as recited in claims 4 and 5. Pet. 41-42, 44-45, 47-48 (citing Ex. 1004, p. 4, col. 2:24-31; p. 5, col. 2:45-p. 6, col. 1:2; p. 7, col. 1:34-44; *see also id.* at p. 4, col. 2:26-29 (*e.g.*, "The premium calculation part 6 . . . calculates insurance premiums"); *id.* at p. 7, col. 1:39-41 ("monetary amount file part 46 has a memory that stores the prepayment balance"). In support of Liberty's contention, Ms. O'Neil testifies that "Kosaka explicitly explains that the 'prepayment amount' is a base [premium] amount that is eventually adjusted to reflect the calculation of a premium for the period in which operating data is actually monitored." Ex. 1009 ¶ 24 (citing Ex. 1004, p. 3).

Liberty also provides a rationale to combine the cited references:

> [A person of ordinary skill in the art] would have been motivated to implement Kosaka's teachings of using monitored driving characteristics to determine insured risk and premiums with Florida Guide's teachings that insurers are required, in issuing policies, to generate an insured profile comprising coverage information, including limits and deductibles, for determining a base cost of vehicle insurance, because insurance companies are required, in issuing policies, to do so.

Pet. 28.

Progressive disagrees and argues that Kosaka fails to disclose or suggest generating an *initial operator profile*. PO Resp. 45-48.

In particular, Progressive argues that Kosaka does not disclose *a profile* of information for an operator. *Id*. at 45. According to Progressive, Kosaka actually discloses a "monetary amount file *part*," which is not a profile of information, but rather "a component that debits funds from a prepayment money balance." *Id*. Progressive also contends that Kosaka's prepayment amount is not a base cost of insurance, but rather "a prepaid amount that funds any additional premium charges that are determined to be owed by the insured using Kosaka's device," similar to "an EZ Pass payment mechanism." *Id*. at 47. In support of its position, Progressive proffers the declaration of Mr. Michael J. Miller. Ex. 2010.

We are not persuaded by Progressive's argument and supporting evidence, as they are based on an overly narrow reading of the prior art references without sufficient consideration of the knowledge of one with ordinary skill in the art. *Paulsen*, 30 F.3d at 1480.

As we discussed above, we regard the conventional insurance cost determination techniques, noted in the background section of the '970 patent, as basic knowledge within the level of ordinary skill in the art. Ex. 1001, 1:17-2:37. In particular, the background section of the '970 patent discloses that conventional insurance cost determination methods involve generating *an insured profile* for the vehicle operator by gathering relevant historical data from a personal interview and public motor vehicle driving records. *Id*. Based on the information in the insured profile (e.g., the value of the vehicle, driver's record, and type of coverage), a vehicle insurance cost is determined. *Id*. at 1:56-2:12. Additionally, conventional insurance

rating systems provide discounts and surcharges for certain types of use of the vehicle, equipment on the vehicle, and type of driver. *Id*. at 2:22-24. For example, discounts are provided to safe drivers, such as those who have a low number of accidents. *Id*. at 2:21-37.

Hence, a person of ordinary skill in the art would have appreciated that when a vehicle operator is applying for an insurance policy from an insurance company, *an insured profile* for the vehicle operator would be generated to determine *a base cost* (i.e., the initial premium), and such an insured profile would include coverage information such as limits and deductibles. We also observe that a person of ordinary skill in the art would have recognized that the base cost is the amount that the insurance company charges *prior to applying any discounts or surcharges*, and the total cost is calculated based on the base cost and any applicable discounts or surcharges associated therewith.

As noted above, Liberty contends that Kosaka, in combination with Florida Guide, discloses a *base cost* of vehicle insurance for the vehicle operator, as recited in claims 4 and 5. Pet. 41-42, 47-48 (citing Ex 1004, p. 4, col. 2:24-31; p. 5, col. 2:45-p. 6, col. 1:2; p. 7, col. 1:34-44). Liberty's expert, Ms. O'Neil, testifies that Kosaka discloses a "prepayment amount" which is "a base cost of insurance or premium specified by the insurer and deposited or paid by the policyholder." Ex. 1009 ¶ 24 (citing Ex. 1004, 1-2, 4). Ms. O'Neil also testifies that "Kosaka explicitly explains that the 'prepayment amount' is a base [premium] amount that is eventually adjusted

to reflect the calculation of a premium for the period in which operating data is actually monitored." *Id*. (citing Ex. 1004, 3).

Progressive's expert, Mr. Miller, disagrees and testifies that a person of ordinary skill in the art "reading Kosaka would not have [associated] it with any traditional means for determining automobile insurance premiums," but rather "would have understood that the prepayment amount of Kosaka was simply a deposit from which Kosaka's charges could be drawn." Ex. 2010 ¶¶ 45-46; PO Resp. 47-48.

In that regard, however, Liberty's expert, Ms. O'Neil, asserts that it is not Kosaka's goal "to require payment of a random 'deposit' number determined out of the blue." Ex. 1022 ¶ 40 (citing Ex. 1004, 2). Ms. O'Neil testifies that "Kosaka's derivation of the risk evaluation values attempts to create a more fair insurance system" and, to achieve the goal of fairness, a person of ordinary skill in the art would have understood that "Kosaka has presented a base premium, which will be modified based on a risk evaluation value determined from the driver's actual driving data to derive a more fair premium." *Id*.

Upon review of the evidence on record, we credit the testimony of Ms. O'Neil over that of Mr. Miller. *See Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010) (holding that Board has discretion to give more weight to one item of evidence over another "unless no reasonable trier of fact could have done so"). We find that Ms. O'Neil's explanations are supported by Kosaka, which discusses the conventional way of calculating insurance premiums and the unfairness of such a system. *See* Ex. 1004, p. 2, col. 2:15-

19 (stating "conventional insurance premium determination systems have involved on-line implementation of paper-based *insurance agreements*, and thus rates have been determined based on risk evaluation using *static attributes of the agreement customer*") (emphasis added); *id.* at p. 2, col. 2:36-40 (stating "with automobile liability insurance[,] which is a type of paper-based insurance agreement, it is normal for there be no difference in insurance premiums between operators who always operate safely, and operators who occasionally take risks. However, it is considered unfair to apply the same insurance premium to both.").

We further are not persuaded by Progressive's argument regarding an EZ Pass payment mechanism. Unlike toll fees for roads that are required only when the driver utilizes the toll road, insurance premiums are required even if the driver is not using his or her vehicle during the coverage period. More significantly, Kosaka expressly describes that premium calculation part 6 calculates *insurance premiums*, Ex. 1004, p. 4, col. 2:26-30, and that the prepayment amount is the initial amount paid by the policyholder for insurance coverage, *id.* at p. 5, col. 2:45-46. As noted by Liberty, a person of ordinary skill in the art would have known that "an insurance company would gather initial information from an insured and, based on that data, require prepayment (before starting coverage) of the entire expected premium as a base amount, all before any actual discounts or surcharge are applied." Reply 8.

Given the evidence of the state of the art at the time of the invention, and the knowledge of one with ordinary skill in the art discussed above, we

observe that a person of ordinary skill in the art would have understood that insurance companies would want to make the prepayment amount the same as the base cost of insurance when utilizing Kosaka's insurance premium determination device. This is so, because the base cost is the amount that the policyholder is obligated to pay the insurance company initially before any monitoring of the vehicle operator's driving characteristics. *See KSR*, 550 U.S. at 421 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton.").

For the foregoing reasons, we conclude that Liberty has demonstrated, by a preponderance of evidence, that claims 4, 5, 16, and 17 are unpatentable over Kosaka and Florida Guide.

### *E. Claims 1, 3, 11, 12, 14, and 15*

Liberty asserts that claims 1, 3, 11, 12, 14, and 15 are unpatentable under 35 U.S.C. § 103(a) over Kosaka, Black Magic, and Herrod. Pet. 23-41, 60-65. In support of that asserted ground of unpatentability, Liberty provides detailed explanations as to how each claim limitation is met by the combination of the cited prior art references and rationales for combining the references. *Id*. Liberty also relies upon declarations of Ms. O'Neil (Ex. 1009) and Mr. Andrews (Ex. 1012) to support its positions.

Upon review of Liberty's petition and supporting evidence, as well as Progressive's response and supporting evidence, we determine that Liberty has demonstrated, by a preponderance of the evidence, that claims 1, 3, 11, 12, 14, and 15 are unpatentable over Kosaka, Black Magic, and Herrod.

*1. Generating actuarial classes*

Claims 1, 3, 11, 12, 14, and 15 each require generating or using actuarial classes. As we articulated above in the claim construction section, we construe the claim term "actuarial class" as "a grouping related to expected loss, which is determined from motor vehicle characteristics or driving characteristics."

Liberty asserts that Herrod, in combination with Kosaka and Black Magic, discloses that, Pet. 35-36, 55-56, 70-71 (citing Ex. 1007, Abs., 1-2):

> generating classes associated with different levels of risk, which group operators or vehicles having a similar risk characteristic, from actual monitored driving characteristics (e.g., acceleration applied by a driver) during a selected time period as represented by recorded data elements representative of an operating state of the vehicles or an action of the operators.

Herrod discloses a computer-based monitoring and reporting device that is used in a vehicle to measure driver acceleration patterns and report associated accident risks. Ex. 1007, 1-2.[11] In that regard, Herrod describes that its device can be used for measuring safety-related features of driving, and the monitored data can be useful to insurance companies. *Id*. Herrod further discloses classifying drivers into *groups, each of which is associated with a different level of accident risk, based on actual monitored data,* such as "levels of acceleration," that represent driver behavior and vehicle operating characteristics. Ex. 1007, Abs., 1-2.

[11] The page numbers used herein to refer to Herrod (Ex. 1007) are the original page numbers of the reference on the top, center of each page.

a. Generating groups of risk based on actual monitored driving data

Progressive argues that one of ordinary skill in the art would not have understood the "behavioral groups" of Herrod to be actuarial classes. PO Resp. 23-30. In particular, Progressive argues, and Mr. Miller testifies, that Herrod's accident statistics obtained from a national survey of drivers using the device "would be unreliable for purposes of establishing an actuarial class," and a person of ordinary skill in the art would not "have created an actuarial class based on survey data." *Id*. at 26-28; Ex. 2010 ¶ 51. Progressive alleges that Herrod's behavioral groups would not suggest actuarial classes to one of ordinary skill in the art, because "Herrod suggests looking at accident statistics (no loss data) in creating its behavioral groups." *Id*. at 28.

Liberty disagrees and argues that Herrod discloses using actual driving data. Reply 13-14 (citing Ex. 1007, 1-2 ("Measurements made on many drivers over a long period are used to establish these levels of accident risk."); Ex. 1022 ¶ 56). Liberty specifically establishes that Herrod discloses:

> [A computer] read[s] the recorded acceleration patterns and the time history of driver group and advice codes. This information is added to a database, which is used to update the algorithms used for analyzing the acceleration patterns and the accident statistics.

*Id*. (citing Ex. 1007, 1-2). Liberty maintains that Herrod discloses creating actuarial classes using actual monitored acceleration data. Reply 2, 9-10 (citing Ex. 1007, Abs., 1-2; Ex. 1022 ¶¶ 49, 53-54). We agree with Liberty.

We are not persuaded by Progressive's arguments and supporting evidence, as they incorrectly characterize Herrod as disclosing mere usage of *survey data*, and fail to discuss Herrod's disclosure, as a whole. A prior art reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985).

Notably, Progressive's arguments and Mr. Miller's testimony narrowly focus on Herrod's disclosure of obtaining additional accident statistics from a national survey of drivers using the device, and ignore Herrod's disclosure of generating groups of accident risk based on *actual monitored driving data*. In particular, Herrod discloses:

> This invention concerns an electronic device for *measuring and recording the levels of acceleration* applied by the drivers of road vehicles. These accelerations include forward acceleration, backward acceleration (braking) and left and right accelerations (cornering). The device contains a computer, which processes accumulated *acceleration data* to determine to which of several behavioural groups the driver belongs. *Each group is associated with a significantly different level of accident risk. Measurements made on many drivers over a long period are used to establish these levels of accident risk*.

Ex. 1007, 1 (emphases added).

Therefore, we are unpersuaded by Progressive's arguments (PO Resp. 26-27), and Mr. Miller's testimony (Ex. 2010 ¶ 51), that are based on an incomplete reading of Herrod: (1) that it merely discloses the usage of *accident statistics* obtained from a national survey, and (2) that it does not

disclose generating groups of accident risk based on *actual monitored acceleration data*.

b. Pertaining to insurance

Progressive alleges that a person of ordinary skill in the art "would not have considered Herrod to be of interest or value to the insurance field or to the determination of insurance premium." PO Resp. 28-29 (citing Ex. 2010 ¶ 48). Progressive also argues that Herrod's device is used for driver training and performance assessment, and to detect "reckless drivers." PO Resp. 24. As support, Mr. Miller testifies that one of ordinary skill in the art, at best, might have understood that Herrod's disclosure concerning a demonstration of competence "meant that the data could have been used by an insurer to determine a driver's eligibility to be offered insurance coverage." Ex. 2010 ¶ 48. Mr. Miller concludes that a person of ordinary skill in the art would have recognized that Herrod's data was not suitable for that purpose as the data is incomplete and unreliable for the purposes of determining insurance premiums. *Id*.

Progressive's argument and Mr. Miller's testimony narrowly focus on only certain aspects of Herrod—"safe drivers [would be able] to demonstrate their competence to insurance companies"—but fail to discuss Herrod's disclosure, as a whole, in a meaningful way from the perspective of one with ordinary skill in the art. *Id*. For instance, Progressive and Mr. Miller do not explain adequately why Herrod's groups of accident risks generated based on monitored driving data, and the database of the recorded acceleration data would not be of interest or value to insurance companies. To the contrary,

Herrod expressly states that the monitored driving data could be useful to insurers and the "database might also be used by . . . *insurance companies, who wish to monitor the standard of driving of certain vehicles*." Ex. 1007, Abs., 1-2 (emphasis added). As noted in the background section of the '970 patent, one with ordinary skill in the art would have possessed the knowledge of determining insurance premiums based on monitored vehicle data. *See, e.g.*, Ex. 1001, 2:66-3:2 (citing U.S. Patent No. 4,667,336, Abs. (disclosing "a system for detecting and recording each time a seat belt is used[, and depending] on the level of seat belt usage[,] the driver earns discounts on car insurance premiums.")).

Therefore, we determine that Mr. Miller's testimony focusing on, and discussing only a selected portion of, Herrod's disclosure is not meaningful and does not account for other relevant portions of Herrod's disclosure. As such, it is entitled to little weight. *See Velander v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003) ("In giving more weight to prior publications than to subsequent conclusory statements by experts, the Board acted well within [its] discretion.").

For the foregoing reasons, we agree with Liberty that a person of ordinary skill in the art would have considered Herrod to be of interest or value to the insurance field.

c. Homogeneity and household data

Progressive submits that one of ordinary skill in the art would have understood that Herrod's driver-specific data would not be suitable for establishing an actuarial class. PO Resp. 29. According to Progressive, one

of ordinary skill in the art would have recognized that, to determine auto insurance premiums accurately, an insurer needs to understand the risk characteristics of all drivers resident in the household. *Id*. (citing Ex. 1007, 3; Ex. 2010 ¶ 49). Progressive also maintains that Herrod fails the homogeneity requirement, because Herrod groups drivers who have acceleration data collected from different driving location settings (e.g., urban and rural settings), creating different degrees of insurance risk. *Id*. (citing Ex. 2010 ¶ 41). In support of Progressive's position, Mr. Miller testifies that Herrod does not disclose that all of the drivers in the household would be monitored and that Herrod's data are incomplete and would fail the actuarial standard for homogeneity. Ex. 2010 ¶¶ 41, 49-50.

Liberty responds that applying those homogeneity and household data requirements to *each risk characteristic* is contrary to the usage of the claim term "actuarial class" in the '970 patent. Reply 14-15 (citing Ex. 1022 ¶¶ 43-47, 49, 51, 53-54, 56). Liberty notes that some of the actuarial classes disclosed in the '970 patent are based on data that are not associated with any location or household—"driving time in minutes by each driver of the insured vehicle," "number of minutes driving at high/low risk times," and "number of sudden acceleration situations." *Id*.; Ex. 1001, 4:30-52.

We agree with Liberty. Indeed, as we have explained in our claim construction analysis above, we decline to add the alleged homogeneity and household data requirements to the broadest reasonable interpretation of the claim term "actuarial class." Progressive's arguments are not commensurate with the scope of the claims. *See In re Self*, 671 F.2d 1344, 1348 (CCPA

1982) ("It is well established that limitations not appearing in the claims cannot be relied upon for patentability.").

Further, Liberty's expert, Ms. O'Neil, testifies that there is "no requirement that a *single risk characteristic* completely measures all insurance risk," because "conventional insurance rating depends on the evaluation and actuarial grouping utilizing many separate risk characteristics, including age, location, mileage, etc." Ex. 1022 ¶ 53 (citing Ex. 1001, 1:28-2:20) (emphasis added). Ms. O'Neil explains that classifications based on driving experience—drivers with less than three years of driving experience and those with greater than three years driving experience—do not depend on driving location. Ex. 1022 ¶ 54. Ms. O'Neil also explains that "Herrod's measured risk characteristics do not have to measure *all* risk distinctions in order to form the basis of valid actuarial classes." *Id.* As to the household issue, Ms. O'Neil testifies that "Herrod discusses providing a programmable monitoring card to any driver of any equipped vehicle[;] any driver with a suitable card or disk can be monitored whilst driving any equipped vehicle." Ex. 1022 ¶ 51 (citing Ex. 1007, 2 (internal quotations omitted)).

On this record, we credit the testimony of Ms. O'Neil over that of Mr. Miller. *See, e.g.*, *Yorkey*, 601 F.3d at 1284. We find Ms. O'Neil's explanations to be more consistent with the level of one with ordinary skill in the art as disclosed in the background section of the '970 patent, as well as with Herrod. In contrast, Mr. Miller does not explain adequately why homogeneity and household data are required. We observe that not every

actuarial class known at the time of invention depends on driving location or household data, such as those disclosed in the background of the '970 patent (Ex. 1001, 1:28-52).

For the foregoing reasons, we agree with Liberty that Herrod's data would be suitable for establishing an actuarial class.

d. Expected loss data

Progressive argues that "in order to be an actuarial class, a group of risks should predict insurance losses or costs," and that Herrod's behavioral groups would not be predictive of insurance claims losses (or premiums). PO Resp. 9-10 (citing Ex. 2010 ¶¶ 16-17), 24-28 (citing Ex. 2010 ¶ 48). Progressive submits that Herrod's behavioral groups would not have differentiated *expected loss costs*. *Id*. at 26. Progressive also alleges that Herrod's *accident statistics* "may help to indicate how safe a driver is, but they are not part of the expected loss determination." *Id*. at 28 (citing Ex. 2010 ¶ 51).

However, Progressive's argument does not account for certain teachings of Herrod, including its device can be used for measuring safety-related features of driving, and *the monitored data can be useful to insurance companies*. Ex. 1007, 1-2. Further, as explained by Liberty, "risk characteristics need not be *direct or complete* predictors of future losses to form the basis of an actuarial class," as confirmed by Actuarial Standards of Practice No. 12 (Ex. 2020, ASOP No. 12 ¶ 5.2) and the examples provided by the '970 patent (Ex. 1001, 1:27-2:47). Reply 13 (emphasis added) (citing Ex. 1022 ¶¶ 7-13, 43, 45-47). Liberty submits that a driver's age or marital

status, or a vehicle's value or age, does not predict losses or costs *directly*, nor do these risk characteristics result in actual insurance claims. *Id*. (citing Ex. 1022 ¶¶ 11-12, Ex. 1001, 1:27-2:47, Ex. 2020, ASOP No. 12 ¶ 5.2, Ex. 2012, 15). In support of Liberty's position, Ms. O'Neil testifies:

> Herrod teaches monitoring and gathering acceleration data and accident statistics to group drivers in "behavioural groups" reflecting different levels of accident risk. A [person of ordinary skill in the art] would know that, in order to create such behavioural groups relevant to insurance rating—which a [person of ordinary skill in the art] would interpret as actuarial classes—would involve analyzing the data collected in Herrod to determine any associated expected loss costs with such data.

Ex. 1022 ¶ 43.

Ms. O'Neil explains that "[i]t is *the job of an actuary* to determine how risk characteristics, such as number of accidents or sudden braking events, correlate to predicted future insurance losses so that an insurer can charge an individual the proper premium," and "[t]his can be done—as explained, for example, in Standard of Practice No. 12—using 'actual experience' (actual frequency and severity claims data) or '*any reliable source*, including statistical or other mathematical analysis of available data.'" Ex. 1022 ¶ 12 (citing Ex. 2020, ASOP No. 12, pp. 3-4). Ms. O'Neil also testifies that a person of ordinary skill in the art would have the knowledge to calculate expected loss costs associated with monitored driving data. Ex. 1022 ¶¶ 45-47.

We credit Ms. O'Neil's testimony (Ex. 1022 ¶¶ 12, 43, 45-47), because her explanations are consistent with Herrod, the disclosure of the

'970 patent, and other evidence on record with respect to the level of ordinary skill in the art. In a proper obviousness analysis, we note that Herrod's disclosure must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *Paulsen*, 30 F.3d at 1480. Such analysis must include reading the prior art in context, taking into account "demands known to the design community," "the background knowledge possessed by a person having ordinary skill in the art," and "the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418.

As noted above, generating actuarial classes of insurance, which group operators or vehicles having a similar risk characteristic, was well known in the art. The background section of the '970 patent describes:

> *Conventional methods for determining costs of motor vehicle insurance* involve gathering relevant historical data from a personal interview with the applicant for the insurance and by referencing the applicant's public motor vehicle driving record that is maintained by a governmental agency, such as a Bureau of Motor Vehicles. *Such data results in a classification of the applicant to a broad actuarial class for which insurance rates are assigned based upon the empirical experience of the insurer*. Many factors are relevant to such classification in a particular actuarial class, such as age, sex, marital status, location of residence and driving record.
>
> *The current system of insurance creates groupings of vehicles and drivers (actuarial classes) based on the following types of classifications*.
>
> Vehicle: Age; manufacturer, model; and value.
>
> Driver: Age; sex; marital status; driving record (based on government reports), violations (citations); at fault accidents; and place of residence.

> Coverage: Types of losses covered, liability, uninsured motorist, comprehensive, and collision; liability limits; and deductibles.

Ex. 1001, 1:17-52 (emphases added).

Actuarial Standard of Practice No. 12 expressly states that "[r]isk classification has been a fundamental part of actuarial practice since the beginning of the profession." Ex. 2020 ¶ 5, ASOP No. 12 § 3. Risk classification is defined as the "process of grouping risks with similar risk characteristics so that differences in costs may be recognized." Ex. 2020, ASOP No. 12 ¶ 2.8. The design of risk classification systems requires "the actuary to exercise professional judgment as well as to use statistical tools." Ex. 2020, ASOP No. 12 § 5. For example, the "actuary can rely on actual or reasonably anticipated experience," and relevant "information from any reliable source, including statistical or other mathematical analysis of available data, may be used." *Id*. § 5.1. Furthermore, in the absence of actual experience, "an actuary may rely on clear actuarial evidence that differences in costs are related to a particular risk characteristic." *Id*. Therefore, one with ordinary skill in the art would have known to analyze the monitored vehicle data collected by Herrod's device to determine any associated expected loss costs with such data, in order to classifying drivers into groups relevant to insurance rating.

For the foregoing reasons, we determine that, in light of Herrod's disclosure, it would have been obvious to one with ordinary skill in the art to generate actuarial classes of insurance by grouping operators having a similar risk characteristic using actual monitored driving data.

*2. Recording time and a corresponding log of vehicle speed*

Because Kosaka does not disclose expressly "a time and location of vehicle operation and a corresponding log of vehicle speed for the time and location," as required by claims 1, 3, 11, 12, 14, and 15, Liberty relies upon Black Magic, in combination of Kosaka and Herrod, to meet this disputed limitation. Pet. 33-34, 39, 61-64 (citing Ex. 1008, 1). Specifically, Liberty relies upon the following disclosures of Black Magic:

> The black box is a computerized unit installed near the dashboard of a vehicle . . . . The unit records information such as driving speed, time and distance travelled and fuel consumption.

Ex. 1008, 1.

> [Global Positioning Systems ("GPS")] technology has wider implications for the insurance industry, as it can produce all the data a black box can and record the vehicle's location.

Ex. 1008, 2.

> The fleet manager can then use the information to assess operating efficiency and to analyze the performance of drivers in terms of exceeding maximum speeds, engine idling time and harsh deceleration.

Ex. 1008, 1.

Progressive counters that Black Magic does not disclose recording time of day or a corresponding log of vehicle speed for the time and location. PO Resp. 42-45. In particular, Progressive alleges that a sentence in Black Magic—"The unit records information such as driving speed, *time and distance travelled* and fuel consumption"—indicates that the unit records "time and distance travelled." *Id*. at 43-44. Progressive contends

that a person of ordinary skill in the art would have understood that Black Magic's "black box" records both the "time travelled" (duration of a trip) and the distance travelled, rather than the time of day. *Id*. at 44.

Upon review of the evidence of record, we are not persuaded by Progressive's argument. Progressive's argument narrowly focuses on one sentence of the disclosure of Black Magic—whether there should be a comma between the words "time" and "and," in the phrase "driving speed, *time and* distance travelled." Progressive fails to consider Black Magic, as a whole, from the perspective of one of ordinary skill in the art. *See Paulsen*, 30 F.3d at 1480. For example, Progressive does not take into account the knowledge of a person with ordinary skill in the art at the time of the invention regarding the functionality of *black box* recorders.

Black Magic describes several latest developments in motor vehicle technology at the time of 1994. Ex. 1008, p. 1. According to Black Magic, black box data recorders—similar to those that were used commonly in aircraft—were starting to be installed in vehicles during this time period. *Id*. The black box computerized unit "records information such as driving speed, time and distance travelled and fuel consumption." *Id*. One insurance company was known to offer an upfront premium discount for vehicles using a black box unit, and most insurers agreed that the black box unit is an invaluable aid to risk management. *Id*. Black Magic also describes using satellite technology, such as GPS technology, to produce "all the data a black box can and record the vehicle's location." *Id*. at 2. One of the electronic experts stated that "[t]he information could be used to

accurately rate premiums according to styles of driving and locality of use." *Id*. (emphasis added).

A person of ordinary skill in the art at the time of the invention would have had a basic knowledge of the functionality of black box data recorders and GPS satellite technology, as they widely were used in aircrafts and in shipping for precise navigation. *See* Ex. 1008, p. 1 ("Black box data recorders, better known for their use in aircraft," and GPS "widely used in shipping for precise navigation."). As explained by Liberty's expert, Mr. Andrews, a person of ordinary skill in the art would have understood from reading Black Magic that the data points captured in the black box would need to "monitor speed linked to [absolute] time (as well as location) in order to derive 'deceleration' or determine whether a car was 'idling' based on recorded 'speed' values, to determine whether a car was exceeding a particular location's posted speed limit, and 'to accurately rate premiums according to styles of driving and locality of use.'" Ex. 1019 ¶ 13 (citing Ex. 1008, 1-2). We credit Mr. Andrews's testimony, because his explanation is consistent with the disclosure of Black Magic and consistent with the knowledge of a person with ordinary skill in the art regarding the functionality of black box recorders (e.g., a reconstruction of accidents requires recorded speed, time of day, and location data) and GPS satellite technology.

For the foregoing reasons, we conclude that Liberty has demonstrated, by a preponderance of the evidence, that claims 1, 3, 11, 12, 14, and 15 are unpatentable over Kosaka, Black Magic, and Herrod.

*F. Claims 6, 9, 10, 13, and 18*

Liberty alleges that claims 6, 9, 10, 13, and 18 are unpatentable under 35 U.S.C. § 103(a) over the combination of Kosaka and Herrod. Pet. 31-34, 52-56, 59-60, 62-63, and 66-71. In support of that asserted ground of unpatentability, Liberty provides explanations as to how each claim limitation is met by the combination of the cited prior art references and a rationale for combining the references. *Id.* Liberty also proffers declarations of Ms. O'Neil (Ex. 1009) and Mr. Andrews (Ex. 1012) to support its positions.

We have reviewed the parties' arguments and supporting evidence, and determined that Liberty has demonstrated, by a preponderance of the evidence, that claims 6, 9, 10, 13, and 18 are unpatentable over Kosaka and Herrod.

Progressive argues that the combination of Kosaka and Herrod does not disclose or suggest actuarial classes and the "correlating" step. PO Resp. 22-30, 39-41. Progressive also asserts that Kosaka and Herrod are not combinable. PO Resp. 30-39. As discussed above, we have addressed Progressive's arguments with respect to generating actuarial classes based on actual monitored driving data (PO Resp. 22-30), and determined those arguments to be unavailing. We now address the merits of Progressive's remaining arguments.

*1. The "correlating" step*

Claims 6, 9, 10, 13, and 18 each require a "correlating" step. For instance, claim 18 recites "correlating the group data values to *preset values* related to *safety standards* in a second memory and generating an *output data value* based on the correlation." Ex. 1001, Reexam. Cert., 3:1-3 (emphases added).

Progressive argues that Kosaka does not disclose that limitation. PO Resp. 39-41. According to Progressive, Kosaka's disclosure of a threshold value that activates the risk assessment and premium adjustment device does not describe the "correlating" step, because: (1) Kosaka does not produce an *output data value* based upon the correlation between the vehicle speed and the threshold value; and (2) Kosaka's "set value" is not related to *safety standards*. PO Resp. 40-41.

We are not persuaded by Progressive's arguments, because they narrowly focus on one sentence in Kosaka, and fails to consider Kosaka's disclosure, as a whole, from the perspective of one of ordinary skill in the art. For instance, Progressive's arguments do not take into account Kosaka's disclosure of correlating vehicle speed and other monitored data with output risk values. Ex. 1004, *e.g.*, at pp. 2, 6-7 ("risk evaluation unit operating on $V_0$, and its 'control operation detection part 44 detects clearly intentional operations, for example, when there is a deviation in the rudder operation mechanism that is at or above a set value'").

Kosaka's insurance premium determination device uses a risk evaluation device for evaluating risk in the vehicle and driver. Ex. 1004,

p. 2; col. 1:54-col. 2:3; col. 2:43-52. As noted by Liberty in its petition, Kosaka explains that "comprehensive evaluation of the states of the vehicle and the operator is carried out, and a *risk evaluation value* is obtained that is matched to empirical evaluation of an individual." Pet. 54 (citing Ex. 1004, p. 3, col. 2:43-47) (emphasis added). More specifically, Kosaka's risk evaluation unit 42 performs real-time evaluation of the *degree of risk* during operation from the state signals of the automobile using signal processing. Ex. 1004, p. 7, col. 1:19-22. Kosaka describes monitoring the *ground speed* of the automobile, and forwarding the output of the speed detector to the signal preprocessing unit and the system activation control part. *Id*. at 7, col. 1:1-9. Kosaka's system *compares the speed with a set value* to determine whether it exceeds the set value. *Id*. at 7, col. 1:5-11. Clearly, Kosaka's system produces a *risk evaluation value* (i.e., an *output data value*) based upon the correlation between the vehicle speed and the threshold value.

In the claim construction section above, we construed the claim term "safety standard" as "value or criteria associated with the promotion of safety or prevention of risk, loss, or injury." In the context of monitoring driving behavior and evaluating risk of the vehicle and driver, Kosaka's *speed threshold value,* used to activate risk assessment device, would have been understood by a person of ordinary skill in the art *as related to safety standards*. Based on Kosaka's disclosure, we agree with Liberty that "Kosaka's disclosure of correlating the group data values to present values (i.e., 'set value' for speed) explicitly teaches . . . that the preset values are related to safety standards." Pet. 69.

*2. Whether there is a rationale to combine Kosaka and Herrod*

Progressive argues that one with ordinary skill in the art would not have combined the teachings of Kosaka and Herrod. PO Resp. 30-39. In particular, Progressive asserts that a person with ordinary skill in the art would have no experience in determining insurance premiums using fuzzy logic. PO Resp. 31. Progressive maintains that Kosaka and Herrod cannot be combined without fundamentally changing their operation. PO Resp. 30. Progressive also alleges that Kosaka teaches away from determining insurance ratings or insurance premiums based on actuarial classes. PO Resp. 31. In support of its arguments, Progressive proffers declarations of Mr. Miller and Mr. Mark Ehsani. Exs. 2010, 2016.

Upon reviewing the parties' arguments and supporting evidence, we hold that Liberty's rationale for modifying Kosaka with the teachings of Herrod constitutes an articulated reason with a rational underpinning to justify the legal conclusion of obviousness. That is, as stated by Liberty:

> [A person with ordinary skill in the art] would have been motivated to implement Kosaka's teachings of using monitored driving characteristics to determine insured risk and premiums with Herrod's teachings of generating actuarial classes of insurance based on the monitored data of many drivers for determining an insured risk, so that, *e.g.*, an insurer can advantageously adjust premiums for a particular vehicle or operator based upon a broader pool of data from other operators and their vehicles as monitored by the system in Kosaka.

Pet. 31-32.

As noted above, generating actuarial classes of insurance, which group operators or vehicles having a similar risk characteristic, was well

known in the art at the time of the invention. Also one of ordinary skill in the art would have possessed the knowledge of determining insurance premiums using vehicle monitored data.

Liberty relies on Herrod to show that actuarial classes can be generated based on *actual monitored driving characteristics*. Pet. 35-36, 55-56. For the reasons stated below, Progressive has not provided sufficient evidence or explanation that the mere substitution of *actual monitored* driving characteristics, for *traditional reported* driving characteristics, would have been beyond the level of an ordinary skilled artisan, in light of the collective teachings of Kosaka and Herrod. *See KSR*, 550 U.S. at 416 ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) ("Accommodating a prior art mechanical device that accomplishes [a desired] goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children's learning devices").

a. Level of ordinary skill in the art

Progressive asserts that one of ordinary skill in the art would not have had *any experience in determining insurance premiums using fuzzy logic*. PO Resp. 31-33 (citing Exs. 2010, 2016). In support of that argument, Progressive's expert, Mr. Ehsani, testifies that Kosaka's approach would have been beyond the level of a person of ordinary skill in the art, who "would not likely have training or understanding of fuzzy logic." Ex. 2016 ¶ 28. Another Progressive expert, Mr. Miller, testifies that one of ordinary

skill in the art of determining insurance premiums would have had *no experience with fuzzy logic*. Ex. 2010 ¶ 38; *see also id. at* ¶ 14.

Progressive's argument is inapposite. Progressive's argument and the testimony of its experts are contradicted by Kosaka's disclosure, which includes teachings of *using fuzzy logic to determine insurance premiums*, and other evidence in the record that shows the state of the art at the time of invention. Progressive's argument and supporting evidence fail to appreciate that a person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art, and the level of ordinary skill in the art may be evidenced by the references themselves. *GPAC*, 57 F.3d at 1579.

More importantly, Progressive's experts fail to explain meaningfully the skill level of a person with ordinary skill in the art with regard to *fuzzy logic as it applies to insurance premium determination*. As Liberty explains, Progressive's experts ignore that insurers were using fuzzy logic, at the time of the invention, to determine insurance premium. Reply 5 (citing Ex. 1022 ¶¶ 24-26, 30, 37 (discussing Exs. 1024-28)). Indeed, the publications submitted by Liberty regarding fuzzy logic, confirm that applying fuzzy logic to insurance classification rating and underwriting was well known at the time of the invention. Exs. 1024-28; *see*, *e.g.*, Ex. 1024 (Shapiro Article) (providing a history of the application of fuzzy logic in insurance since 1982; providing an extensive list of references at pages 57

through 61,[12] many predating 1996; and demonstrating the application of fuzzy logic to rating territories and classifications based on age groupings)). Therefore, the testimony of Progressive's experts regarding the skill level of a person with ordinary skill in the art, pertaining to using fuzzy logic to determine insurance premiums is entitled to little weight. *Rohm and Haas Co. v. Brotech Corp*., 127 F.3d 1089, 1092 (Fed. Cir. 1997) ("Nothing in the rules or in our jurisprudence requires the fact finder to credit the unsupported assertions of an expert witness.").

For the foregoing reasons, we agree with Liberty that a person of ordinary skill in the art would have had experience in determining insurance premiums using fuzzy logic.

b. Enabling prior art

Progressive argues that Kosaka is deficient and one of ordinary skill in the art would not have understood how Kosaka's risk evaluation values are generated using *fuzzy logic*. PO Resp. 32-33 (citing Ex. 2016 ¶ 30-32). In support of Progressive's contention, Mr. Ehsani testifies that, due to the deficiencies in Kosaka's disclosure, a person of ordinary skill in the art would not have understood how the fuzzy risk evaluation values are generated. Ex. 2016 ¶ 30.

Prior art publications and patents are presumed to be enabled. *In re Antor Media Corp.*, 689 F.3d 1282, 1287-88 (Fed. Cir. 2012); *Amgen Inc. v.*

[12] The page numbers in the Shapiro Article refer to the page numbers in the top, right corner.

*Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1355 (Fed. Cir. 2003). Once specific, concrete reasons as to why the cited prior art reference is not enabling have been identified, we conduct an analysis by reviewing the argument and supporting evidence to determine whether the prior art is enabling. *Antor*, 689 F.3d at 1292; *see also In re Morsa*, 713 F.3d 104, 110 (Fed. Cir. 2013). To that end, we will determine whether a person with ordinary skill in the art could *make or use the claimed invention without undue experimentation* based on the disclosure of the cited prior art reference. *Morsa*, 713 F.3d at 110.

We have reviewed Progressive's argument and supporting evidence, but we are not persuaded that Kosaka is non-enabling prior art in light of the level of ordinary skill in the art at the time of the invention.

Progressive fails to recognize that Kosaka explicitly states that *fuzzy logic need not be used*. Ex. 1004, p. 6, col. 1:45-51. Even if fuzzy logic is used, Progressive has not demonstrated that a person of ordinary skill in the art could not have made or used the claimed invention *without undue experimentation* based on Kosaka's disclosure.

Although Mr. Ehsani discusses certain portions of Kosaka's disclosure, he does not explain sufficiently why one with ordinary skill in the art could not have determined insurance premiums using fuzzy logic, *without undue experimentation*. Neither Progressive nor Mr. Ehsani identifies with sufficient specificity what undue experimentation would be needed. In fact, Progressive's argument and the testimony of Mr. Ehsani do not make any assessment of the level of experimentation that would be

required for one of ordinary skill in the fuzzy logic art to make and use Kosaka's device. The complexity of experimentation does not make it undue necessarily, if the art typically engages in such experimentation. *See In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). Moreover, on the record before us, the evidence of the level of ordinary skill in the art shows that, prior to Progressive's invention, insurers were using fuzzy logic to determine insurance premium. Exs. 1024-28.[13]

For the foregoing reasons, Progressive has not demonstrated adequately that Kosaka is non-enabling prior art.

c. Does not require changing operation fundamentally

Progressive maintains that Kosaka and Herrod cannot be combined without fundamentally changing their operation. PO Resp. 30. In particular, Progressive argues that "Kosaka's fuzzy logic and Herrod's crisp logic

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[13] Arnold F. Shapiro, *An Overview of Insurance Uses of Fuzzy Logic*, in II COMPUTATIONAL INTELLIGENCE IN ECONOMICS AND FINANCE 25 (Paul P. Wang, et al., ed., Springer Berlin Heidelberg 2007) (Ex. 1024); Luis A. Carreno, *et al.*, *A Fuzzy Expert System Approach to Insurance Risk Assessment Using FuzzyCLIPS*, in WESCON CONFERENCE RECORD 536 (1993) (reference no. 13 from Shapiro Article at 58) (Ex. 1025); Jean Lemaire, *Fuzzy Insurance*, in 20 ASTIN BULLETIN INTERNATIONAL ACTUARIAL ASSOCIATION 33 (1990) (Ex. 1026); Richard A. Derrig, *et al.*, *Fuzzy Techniques of Pattern Recognition in Risk and Claim Classification*, in 62 J. OF RISK AND INS., 447 (Sept. 1995) (Ex. 1027); Virginia R. Young, *Adjusting Indicated Insurance Rates: Fuzzy Rules that Consider Both Experience and Auxiliary Data*, in PROCEEDINGS OF THE CASUALTY ACTUARIAL SOCIETY CASUALTY ACTUARIAL SOCIETY - ARLINGTON, VIRGINIA 734 (1997) (Ex. 1028).

approaches are diametrically opposed." *Id*. at 36. According to Progressive, an actuarial class approach cannot generate multiple fuzzy values and, therefore, a fundamental change in operation is required to implement fuzzy logic to achieve an actuarial class approach or to apply the actuarial class approach in place of fuzzy logic. *Id*. 36-37 (citing Ex. 2016 ¶ 34). As support, Mr. Ehsani testifies that "use of actuarial classes is a crisp approach and generates only a single crisp value (i.e., a single assignment) for a particular risk category," yet fuzzy logic "uses multiple, partial values to show degrees of membership a variable of interest might have for its membership functions." Ex. 2016 ¶ 34. Mr. Miller testifies that "fuzzy logic relies on a fuzzy-set mathematical theory that results in data sets that are not mutually exclusive," and a person with ordinary skill in the art could not have ascertained that "there was any true difference in risk between two Kosaka risk values produced via fuzzy logic." Ex. 2010 ¶ 39.

In response to Progressive's argument, Liberty proffers additional explanation and rebuttal evidence. Reply 3-7, Exs. 1019, 1022. Liberty asserts that "Kosaka explicitly states that *fuzzy logic need not be used*, even in the embodiment where it is disclosed." Reply 3 (citing Ex. 1004, p. 6, col. 1:45-51 ("determination [of risk evaluation values] may be carried out *without using fuzzy logic*. Calculation may also be carried out using a *common insurance table*."); Ex. 1019 ¶ 10; Ex. 1022 ¶¶ 24-30, 37 (emphases added)).

Liberty explains that, even if Kosaka's fuzzy logic feature is used in the process, the result is to generate *crisp risk evaluation values*, "which are

distinct and easily fit within a 'crisp' logic system." Reply 3 (citing Ex. 1022 ¶ 37); Ex. 1019 ¶ 9. Liberty's expert, Mr. Andrews, testifies that after the data is processed through the fuzzy logic unit, a person of ordinary skill in the art would have understood that "it must be converted into a crisp value through a process call defuzzification, a standard part of basic fuzzy logic implementation," to provide a usable, actionable output. Ex. 1019 ¶ 9. Mr. Andrews also explains that Kosaka explicitly describes using *defuzzification*. Ex. 1019 ¶ 9 (citing Ex. 1004, 8).

Liberty also maintains that a person of ordinary skill in the art would have possessed the knowledge of using Kosaka's *crisp risk evaluation values* to create actuarial classes in light of Herrod's disclosure. Reply 3-7 (citing Ex. 1022 ¶¶ 24-37). In support of that position, Liberty submits several publications, as well as Ms. O'Neil's testimony, to demonstrate that it was well known in the art at the time of invention to apply fuzzy logic in insurance and classification rate making. *See* Exs. 1024-28; Ex. 1022 ¶ 31 (citing Ex. 1025 and 27, as examples).

Upon consideration of the parties' arguments and supporting evidence, we credit the testimony of Liberty's experts over those of Progressive's experts. *See, e.g.*, *Yorkey*, 601 F.3d at 1284. We find that the testimony of Liberty's experts—regarding defuzzification, crisp risk evaluation values, and the application of fuzzy logic in insurance and classification rate making—are consistent with Kosaka's disclosure and the publications that demonstrate the level of ordinary skill in the art at the time of invention. Ex. 1024, 28; *see also* Ex. 1004, p. 8, col. 1:40-43 ("This first

fuzzy logic part has a function whereby it carries out defuzzification subsequent to balancing the MIN-MAX outputs"); Ex. 1027 (Derrig Article) (describing an application of fuzzy techniques to derive Massachusetts automobile rating territories; the resulting rating territories conform to the required criteria for rating classifications such as non-overlap between classes); Ex. 1025 (Carreno Article) (describing an insurance system that combines "fuzzy processing with [a] rule-based expert system" and outputs a "crisp value for Risk in the range [0,1]"). In contrast, Progressive's experts fail to discuss meaningfully what Kosaka's disclosure, as a whole, would have reasonably conveyed to one with ordinary skill in the art, including Kosaka's defuzzification and non-fuzzy logic disclosures. Moreover, as we discussed above, Progressive's experts narrowly define the skill level of a person with ordinary skill in the art.

To support its position, Progressive also cites *Ex parte Acharya*, App. No. 2010-3919, slip op. at 6 (BPAI June 19, 2012) (Ex. 2004) for the premise that prior art references cannot be combined "where one used an approach that crisply placed an item in a group and the other used an approach that involved *varying degrees of assignment within groups*." PO Resp. 37. Progressive's reliance on *Acharya* is misplaced. Generally, each case before the Board is limited to its particular facts and does not purport to govern determinations involving a different invention, different prior art, and different level of ordinary skill in the art. Progressive does not provide any meaningful explanation as to how the particular facts in *Acharya* are similar to the facts in the instant trial, such that the same

conclusion must be reached here. Progressive fails to recognize that Kosaka's fuzzy logic feature need not be used, and even if fuzzy logic feature is used, the result is to generate *crisp risk evaluation values*, instead of *fuzzy* data sets. Moreover, Progressive does not explain adequately how combining Kosaka's disclosure of *crisp* risk evaluation values with Herrod's disclosure of generating actuarial classes of insurance based on actual monitored vehicle data would have required a substantial reconstruction and redesign of Kosaka's device, or a change in the basic principles of operation under which Kosaka's device was designed to operate.

For the foregoing reasons, we are not persuaded by Progressive's arguments that Kosaka and Herrod cannot be combined without fundamentally changing their operation, or that it is beyond the skill level of a person of ordinary skill in the art to modify Kosaka, with the teachings of Herrod, to generate actuarial classes from actual monitored driving data.

d. Teaching away argument

Progressive argues that Kosaka teaches away from determining insurance ratings or insurance premiums based on *actuarial classes*. PO Resp. 38-39. In particular, Progressive submits that Kosaka criticizes the conventional approach of using actuarial classes to determine insurance premiums. *Id*. Liberty responds that "Kosaka explicitly states *fuzzy logic need not be used* with its vehicle sensors to evaluate driver safety and set insurance costs and premiums." Reply 1, 3 (citing Ex. 1004, 6) (emphasis in original). Liberty further maintains that, with or without fuzzy processing, Kosaka's device generates results in *crisp evaluation values*. *Id*.

To constitute a proper "teaching away," the teaching of the applicable prior art reference must be evaluated from a technological perspective, not merely a comparative perspective. For instance, it is not a "teaching away" unless one with ordinary skill in the art would have understood that teaching as conveying that the method or structural configuration at issue reasonably cannot be expected to achieve what it is required to achieve according to the claimed invention. *See, e.g.*, *Syntex (U.S.A) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005) ("Under the proper legal standard, a reference will teach away when it suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention." (citing *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994))). Further, "just because better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes." *In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012). In that regard, one is not significantly "taught away" from a "particularly preferred embodiment" by the suggestion that something else may be even better. *In re Susi*, 440 F.2d 442, 446 n.3 (CCPA 1971).

We are not persuaded by Progressive's argument, as it is premised on the incorrect notion that Kosaka's *fuzzy logic feature must be used* and Kosaka's result is a *fuzzy data set*, which we found unpersuasive above.

Progressive also reads incorrectly, and without support, Kosaka's statement—the "invention thus has the advantage of being a more equitable insurance system" (Ex. 1004, p. 9, col. 2:1-2)—as criticizing actuarial classes. PO Resp. 38. That statement in Kosaka has little to do with

actuarial classes. In fact, in the next sentence, Kosaka explains how its device can be used *without the fuzzy logic feature*. Ex. 1004, p. 9, col. 2:2-3 ("In this case, the risk evaluation means *need not contain* an evaluation part that operates by *fuzzy logic*.") (Emphasis added.). That discussion in Kosaka merely shows how its device—with or without using the fuzzy logic feature—could provide an equitable insurance system. That goal also is consistent with the risk classification system that uses actuarial classes. *See, e.g.*, Ex. 2020, ASOP No. 12 § 5 ("there are three primary purposes of risk classification: 1. *to be fair*, . . .") (Emphasis added). Progressive does not explain meaningfully how Kosaka's disclosure, as a whole, would have discouraged one of ordinary skill in the art from using actuarial classes or risk classification. *In re Gurley*, 27 F.3d at 553.

Progressive also reads incorrectly, and without support, Kosaka's discussion concerning conventional paper-based insurance agreements (Ex. 1004, p. 2, col. 2:15-52) as criticizing actuarial classes. PO Resp. 39. Again, that discussion has little to do with actuarial classes. Kosaka merely highlights the advantage of using *monitored driving data*, by comparing the conventional *paper-based* insurance agreements that determine a premium based on using *static attributes* of the driver with Kosaka's automated device that *monitors driving characteristics* and calculates a premium based on the *monitored driving data*. Ex. 1004, p. 2, col. 2:15-52. Therefore, we do not discern that Kosaka criticizes, discredits or otherwise discourages the approach of using actuarial classes to determine insurance premiums.

For the foregoing reasons, we are not persuaded by Progressive's arguments, and hold that Liberty has demonstrated, by a preponderance of the evidence, that claims 6, 9, 10, 13, and 18 of the '970 patent are unpatentable over Kosaka and Herrod.

*G. Liberty's Motion to Exclude*

Liberty seeks to exclude certain testimony of Mr. Ehsani (Ex. 2016 ¶¶ 28-34). Paper 48 ("Mot.") at 5-6. As the movant, Liberty has the burden of proof to establish that it is entitled to the requested relief. *See* 37 C.F.R. § 42.20(c). To that end, Liberty argues that Mr. Ehsani "lacks the necessary 'scientific, technical, or other specialized knowledge' on insurance issues pertinent to the '970 patent to provide testimony on this subject." Mot. 5. Pursuant to Federal Rule of Evidence 702[14], Liberty alleges that Mr. Ehsani fails to provide sufficient underlying facts or data upon which his opinions regarding insurance matters and telematics matters are based. *Id*. at 6-7.

Progressive counters that, in forming his opinion, Mr. Ehsani relied on Mr. Miller's description of an actuarial class. Paper 56 ("Opp.") at 3 (citing Ex. 2016 ¶ 33, in which Mr. Ehsani declares that "I have been asked to assume that an 'actuarial class' has the following characteristics . . ."). According to Progressive, Mr. Ehsani applied his own expertise as to fuzzy logic and crisp logic using Mr. Miller's description of actuarial classes, pursuant to Federal Rule of Evidence 703. Opp. 3-4 (citing Federal Rule of

[14] As stated in 37 C.F.R. § 42.62, the Federal Rules of Evidence generally apply to a covered business method patent review.

Evidence 703 ("An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed.")).

We agree with Progressive. Mr. Ehsani may rely upon Mr. Miller's opinion on actuarial classes or other insurance aspects to formulate his opinion as to fuzzy logic, based on his education, experience, and skills, as outlined in his curriculum vitae (Ex. 2016 ¶¶ 1-12). We also are cognizant of Mr. Ehsani's qualifications and have weighed his testimony accordingly.

With respect to whether Mr. Ehsani's testimony should be excluded for lack of supporting facts or data, Liberty has not explained adequately why the Board should exclude Mr. Ehsani's testimony. There is a strong public policy for making all information filed in a non-jury, quasi-judicial administrative proceeding available to the public, especially in an *inter partes* review which determines the patentability of claim in an issued patent. It is within the Board's discretion to assign the appropriate weight to be accorded to evidence. *See, e.g.*, *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations."); *Velander*, 348 F.3d at 1371 ("In giving more weight to prior publications than to subsequent conclusory statements by experts, the Board acted well within [its] discretion."); *Yorkey*, 601 F.3d at 1284 (holding the Board has discretion to give more weight to one item of evidence over another "unless no reasonable trier of fact could have done so"). As Liberty points out, it is better to have a complete record of the evidence submitted by the parties

than to exclude particular pieces. Mot. 2 (citing *e.g., Donnelly Garment Co. v. NLRB*, 123 F.2d 215, 224 (8th Cir. 1942) ("One who is capable of ruling accurately upon the admissibility of evidence is equally capable of sifting it accurately after it has been received.")).

Accordingly, Liberty's motion to exclude is *denied*.

*H. Progressive's Motion to Exclude*

Progressive seeks to exclude certain evidence submitted in support of Liberty's reply. Paper 51 ("PO Mot."). Liberty opposes Progressive's motion to exclude. Paper 57 ("Opp."). For the reasons stated below, Progressive's motion is *denied*.

As the movant, Progressive has the burden of proof to establish that it is entitled to the requested relief. *See* 37 C.F.R. § 42.20(c). A motion to exclude must explain why the evidence is not admissible (e.g., relevance or hearsay), but may not be used to challenge the sufficiency of the evidence to prove a particular fact. Office Patent Trial Practice Guide, 77 Fed. Reg. 48765, 48767 (Aug. 14, 2012). A motion to exclude evidence also must:

(a) Identify where in the record the objection originally was made;
(b) Identify where in the record the evidence sought to be excluded was relied upon by an opponent;
(c) Address objections to exhibits in numerical order; and
(d) Explain each objection.

*Id*. Progressive's motion to exclude does not identify where in the record the objection originally was made, and does not address objections to exhibits in numerical order.

While a motion to exclude may raise issues related to admissibility of evidence, it is not an opportunity to file a sur-reply, and also is not a mechanism to argue that a reply contains new arguments or relies on evidence necessary to make out a prima facie case. Here, Progressive's motion to exclude contains such improper arguments, and is in the nature of a sur-reply. PO Mot. 1-15. Moreover, as discussed below, Progressive's arguments also are without merit.

*1. Evidence concerning the level of skill in the art and Kosaka*

Progressive seeks to exclude several publications (Exs. 1020, 1021, 1024-1028) and the declarations addressing those publications (Ex. 1019 ¶¶ 5-10; Ex. 1022 ¶¶ 24, 26, 28, 29, 31, 37). PO Mot. 4-14, Paper 62 ("PO Reply") at 3-5. According to Progressive, Liberty submitted those publications to combine with Kosaka as new grounds of unpatentability. *Id*. Progressive alleges that the declarations assert new prior art and new arguments for unpatentability based on new portions of Kosaka. *Id*. Progressive also argues that the evidence discussed above is unreliable. *Id*.

Liberty counters that the Board instituted the instant trial based on Liberty's arguments and evidence submitted with its petition and, therefore, its rebuttal evidence should not be excluded as "new evidence" that should have been submitted with the petition to make out a prima facie case. Opp. 2 (citing Decision on Institution, Paper 10 at 2). Liberty also maintains that its rebuttal evidence was submitted properly to respond to the issues raised in Progressive's response, as it continues to urge unpatentability on

the same grounds instituted by the Board. *Id.* In particular, Liberty argues that its experts properly responded to Progressive's arguments—Kosaka's fuzzy logic approach would have been beyond the skill level of one of ordinary skill in the art, and Kosaka would not have enabled a person of ordinary skill in the art to understand or use the fuzzy logic approach. Opp. 3 (citing PO Resp. 32-33, Ex. 2016 ¶¶ 28-32). According to Liberty, its experts specifically countered Progressive's arguments by directing the Board's attention to the publications as evidence confirming that applying fuzzy logic to insurance is within the level of ordinary skill in the art. Opp. 3-4 (citing Ex. 1019 ¶¶ 5-8; Ex. 1022 ¶¶ 24, 26, 28, 31).

Having considered the parties' arguments and supporting evidence, we are not persuaded by Progressive's arguments. Rather, we agree with Liberty that the publications and declaration evidence addressing those publications were submitted to confirm the level of ordinary skill in the art—an issue that was raised by Progressive in its patent owner response (PO Resp. 30-38). More importantly, we do not agree with Progressive's argument that Liberty attempted to combine those publications with Kosaka as one or more new grounds of unpatentability. Liberty has not relied upon any of the publications to meet the claim limitations. Instead, the publications merely constitute evidence of the knowledge of a person with ordinary skill in the art. *Randall Mfg. v. Rea*, No. 2012-1611, 2013 WL 5813334, at *4 (Fed. Cir. Oct. 30, 2013) (When considering whether a claimed invention would have been obvious, "the knowledge of [an ordinarily skilled] artisan is part of the store of public knowledge that must

be consulted."). Such evidence does not change the combination that formed the basis of the grounds of unpatentability. *Id*.; *see also In re Donohue*, 766 F.2d 531, 534 (Fed. Cir. 1985).

With respect to Progressive's argument that Liberty's expert relied upon new portions of Kosaka (PO Mot. 7-10), it would be unreasonable to prohibit rebuttal testimony from referring to the same figures or portions of the reference discussed by Progressive's expert in support of its patent owner response. The testimony of Liberty's expert, Mr. Andrews (Ex. 1019 ¶¶ 5-9), was submitted in response to Mr. Ehsani's testimony concerning Kosaka's Figures 10 and 11 (Ex. 2016 ¶¶ 28-29, 31). To rebut Mr. Ehsani's assertions regarding Kosaka's Figures 10 and 11, it would be reasonable for Mr. Andrews's rebuttal testimony to address those same figures. Therefore, we do not agree with Progressive's position that Mr. Andrews's testimony should be excluded.

We also are not persuaded by Progressive's argument that Mr. Andrews's testimony is unreliable for relying upon "after-the-fact disclosures." PO Mot. 9-10. Mr. Andrews does not rely on the 1997 and 1999 publications (Ex. 1020-1021) as prior art against Progressive's claims. It is well settled that references that have publication dates after the critical date may be cited to show the state of the art at or around the time of the invention. *Eli Lilly and Co. v. Barr Labs., Inc.*, 251 F.3d 955, 969-70 (Fed. Cir. 2001); *see also In re Wilson*, 311 F.2d 266, 268-269 (CCPA 1962). Mr. Andrews's testimony (Ex. 1019 ¶¶ 5, 6, 8, 9) was submitted to rebut Mr. Ehsani's assertion that a person of ordinary skill in the art *would not*

*have had training or understanding of fuzzy logic* in 1996 (Ex. 2016 ¶¶ 28, 31, 32). Mr. Andrews's testimony directed our attention to: (1) the 1997 paper, authored by Mr. Ehsani, that cites an existing 1994 book on fuzzy logic (Ex. 1020); and (2) the 1999 text book that states—"fuzzy logic has finally been accepted as an emerging technology since the late 1980s" (Ex. 1021, 3[15]). Mr. Andrews's testimony is consistent with those publications. Notably, the 1997 paper authored by Mr. Ehsani (Ex. 1020) cites to several fuzzy logic publications with publication dates that are *1994 or earlier*. Consequently, we disagree with Progressive's position that Mr. Andrews's testimony with respect to those publications is unreliable.

As to Progressive's argument that Mr. Andrews is not qualified as a person of ordinary skill in the *insurance aspects* of the '970 patent (PO Mot. 9-10 (citing Ex. 1019 ¶¶ 5, 8)), we agree with Liberty that Mr. Andrews's testimony in those paragraphs contains no opinion on the "insurance aspect of Kosaka." *See* Opp. 7-8, Ex. 1019 ¶¶ 5, 8. In fact, Mr. Andrews declined to testify on the insurance issue—"In Kosaka, the particular parameter values associated with this classification would be a question of insurance underwriting, which is something that neither Dr. Ehsani nor myself are qualified to determine–rather, this would be determined by a person of ordinary skill in the insurance aspects of the '970 patent." Ex. 1019 ¶ 8. Therefore, we disagree with Progressive's position that Mr. Andrews is not

[15] All references to the page numbers in the 1999 text book refer to the original page numbers in the bottom, right corner.

qualified to testify with regard to the subject matter in paragraphs 5 and 8 of his declaration (Ex. 1019 ¶¶ 5, 8).

We also are not persuaded by Progressive's arguments that the testimony of Liberty's experts regarding the defuzzification, crisp values, and non-fuzzy logic disclosures of Kosaka is improper rebuttal evidence. PO Mot. 10-14 (citing Ex. 1019 ¶¶ 9-10; Ex. 1022 ¶¶ 26, 28, 29, 31, 37; Exs. 1021, 1025). Rather, we determine that Liberty properly submitted the evidence to rebut Progressive's arguments that Kosaka's device generates *fuzzy* values rather than *crisp* values, and that Kosaka is *nonenabling*, both of which are issues raised by Progressive in its patent owner response (PO Resp. 30-38). As Liberty points out, its experts "responded by explaining that the use of both 'fuzzy' interim values and 'crisp' results in Kosaka's disclosure would, to the contrary, have been understood by a [person of ordinary skill in the art], including the conversion of 'fuzzy' values to 'crisp' values through standard 'defuzzification.'" Opp. 10 (citing Ex. 1019 ¶¶ 9-10; Ex. 1021; Ex. 1022 ¶¶ 26, 28, 29, 31, 37; Ex. 1025). Moreover, merely pointing to the non-fuzzy logic disclosure of Kosaka in response to Progressive's non-enabling argument does not constitute a new theory to support a ground of unpatentability. We, thus, disagree with Progressive's position that the testimony of Liberty's experts should be excluded.

Progressive further alleges that Ms. O'Neil's testimony as to Kosaka's fuzzy logic disclosure is unreliable, because Ms. O'Neil is not qualified as an expert in fuzzy logic, but rather an insurance expert. PO Mot. 12 (citing

Ex. 1022 ¶¶ 26, 37). We are not persuaded by Progressive's argument. Instead, we agree with Liberty (Opp. 11) that Ms. O'Neil may respond to the testimony of Progressive's expert, Mr. Miller (Ex. 2010 ¶¶ 36, 43), who also is not a fuzzy logic expert, but rather is an insurance expert (Ex. 2010, Ex. 2015). We also observe that Ms. O'Neil cited, in her testimony, several fuzzy logic publications (Exs. 1025-1028) and Kosaka for support (Ex. 1004, 1, 8, Fig. 11). Moreover, we are cognizant of the qualifications of Ms. O'Neil in her field of expertise and have weighed her testimony on the specific subject, accordingly, with the underlying facts on which the opinion is based. It is not necessary to exclude any portion of her testimony. For these reasons, we do not agree with Progressive that Ms. O'Neil's testimony should be excluded.

Progressive also alleges that another portion of Ms. O'Neil's declaration is unreliable. PO Mot. 14 (citing Ex. 1022 ¶ 29). According to Progressive, Ms. O'Neil's statement made in her reply declaration—"fuzzy logic is not the key point in the Kosaka reference" (Ex. 1022 ¶ 29)—contradicts her cross examination testimony—"all of the embodiments that are actually disclosed and described in the Kosaka patent use fuzzy logic," the "patent is presented using fuzzy logic," and "tout[s] the advantage of using fuzzy logic" (Ex. 2022, 90:3-7, 90:23-91:2). PO Mot. 14. However, Ms. O'Neil's statement made in her reply declaration does not contradict Kosaka's disclosure, as a whole. Kosaka explicitly states that *fuzzy logic need not be used*, even in the embodiment where it is disclosed. Ex. 1004, p. 6, col. 1:45-51. Furthermore, any inconsistency simply would affect the

weighing of the evidence. Therefore, we do not agree with Progressive that Ms. O'Neil's testimony should be excluded.

*2. Rebuttal evidence concerning Herrod*

Progressive seeks to exclude Ms. O'Neil's rebuttal testimony concerning Herrod. Mot. 14-15 (citing Ex. 1022 ¶¶ 43, 45-47, 49, and 51). Progressive argues that Ms. O'Neil improperly relied on different portions of Herrod's disclosure than those cited in Liberty's petition. Mot. 15 (*comparing* Ex. 1022 ¶¶ 43 and 51 *with* Pet. 36-37, 55-56, and 70-71). Progressive further contends that Ms. O'Neil introduced new opinions as to the knowledge of a person of ordinary skill in the art with respect to Herrod. Mot. 5 (citing Ex. 1022 ¶¶ 43, 45-47, 49). Liberty counters that Ms. O'Neil's testimony merely was submitted to rebut Progressive's arguments—"Herrod is too technical and has no 'relevance' to insurance premium determination or Progressive's redefinition of 'actuarial classes.'" Opp. 13 (citing PO Resp. 24-25, Ex. 2010 ¶ 48).

We are not persuaded by Progressive's argument. Rather, we determine that Ms. O'Neil's testimony (Ex. 1022 ¶¶ 43, 45-47, 49) is proper rebuttal evidence that responds to the issues raised by Progressive in its patent owner response—Progressive's newly proposed construction of claim term "actuarial class" and Progressive's arguments related the skill level of a person of ordinary skill in the art (PO Resp. 23-30). Notably, each section of Ms. O'Neil's testimony (Ex. 1022 ¶¶ 42, 48) first directs our attention to the testimony of Progressive's expert, Mr. Miller (Ex. 2010 ¶ 48), and then

presents her rebuttal testimony as to Mr. Miller's assertions (Ex. 1022 ¶¶ 43, 45-47, 49). For instance, to rebut Progressive's argument, and Mr. Miller's corresponding testimony, that a person of ordinary skill in the art "would have had no reason to think that the disclosure of Herrod had any relevance to . . . the determination of auto insurance premiums" (PO Resp. 25, Ex. 2010 ¶ 48), Ms. O'Neil testifies that such a contention is based on an unreasonably narrow reading of Herrod's disclosure. Ex. 1022 ¶ 43. Ms. O'Neil points out that Herrod's disclosure, on its face, explicitly and repeatedly describes using its system for insurance purposes. *Id*. (citing Ex. 1007, 1, 2).

For the reasons stated above, Progressive has not demonstrated that Ms. O'Neil's testimony exceeds the proper scope of reply evidence.

*3. Evidence concerning actuarial classes*

Progressive seeks to exclude Ms. O'Neil's rebuttal testimony as to actuarial classes as unreliable, irrelevant, and highly prejudicial, pursuant to Federal Rules of Evidence 702, 402, and 403. Mot. 15 (citing Ex. 1022 ¶¶ 8, 13, 45, 50, and 56). Progressive alleges that Ms. O'Neil "claimed repeatedly that Progressive's expert required using only 'actual claims data' to generate actuarial classes even though he did not so testify." Mot. 15 (citing Ex. 2022, 31:11-13, 39:8-9, 39:21-24).

Progressive further states that its argument is set forth more fully in its motion to exclude in CBM2012-00004 at pages 8-11. Progressive attempts to circumvent the page limit set forth in 37 C.F.R. § 42.24(a)(v),

and also violates the prohibition of incorporation by reference (37 C.F.R. § 42.6(a)(3)). We decline to consider Progressive's arguments, because they are not sufficiently explained or made in this proceeding.

We also agree with Liberty that "the Board, sitting as a non-jury tribunal with administrative expertise, is well-positioned to determine and assign appropriate weight to the evidence presented in this trial, without resorting to formal exclusion that might later be held reversible error." Opp. 1 (citing *e.g.*, *S.E.C. v. Guenthner*, 395 F. Supp. 2d 835, 842 n.3 (D. Neb. 2005)).

For the foregoing reasons, we decline to exclude any of Liberty's evidence filed in support of its reply. Accordingly, Progressive's motion to exclude evidence is *denied*.

## III. CONCLUSION

Liberty has met its burden of proof, by a preponderance of the evidence, in showing that claims 1, 3-6, and 9-18 of the '970 patent are unpatentable based on the following grounds:

A. Claims 4, 5, 16, and 17 are unpatentable under 35 U.S.C. § 103(a) over Kosaka and Florida Guide;

B. Claims 1, 3, 11, 12, 14, and 15 are unpatentable under 35 U.S.C. § 103(a) over Kosaka, Black Magic, and Herrod; and

C. Claims 6, 9, 10, 13, and 18 are unpatentable under 35 U.S.C. § 103(a) over Kosaka and Herrod.

## IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1, 3-6, and 9-18 of the ’970 patent are CANCELLED;

FURTHER ORDERED that Liberty’s Motion to Exclude Evidence is *denied*; and

FURTHER ORDERED that Progressive’s Motion to Exclude Evidence is *denied*.

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