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 - 704.11(b)-When May a Requirement for Information Be Made
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716 Affidavits or Declarations Under 37 CFR 1.132 and Other Evidence Traversing Rejections [R-07.2022]

37 CFR 1.132 Affidavits or declarations traversing rejections or objections.

When any claim of an application or a patent under reexamination is rejected or objected to, any evidence submitted to traverse the rejection or objection on a basis not otherwise provided for must be by way of an oath or declaration under this section.

It is the responsibility of the primary examiner to personally review and decide whether affidavits or declarations under [37 CFR 1.132](#) and other evidence submitted for the purpose of traversing grounds of rejection are responsive to the rejection and present sufficient facts to overcome the rejection. Publications may be evidence of the facts at issue and should be considered to the extent that they are probative and properly submitted. See [MPEP § 716.01](#) *et seq.*

This rule sets forth the general policy of the Office consistently followed for a long period of time of receiving affidavit evidence traversing rejections or objections. All affidavits or declarations presented which do not fall within or under other specific rules are to be treated or considered as falling under this rule.

An affidavit is a statement in writing made under oath before a notary public, magistrate, or officer authorized to administer oaths. See [MPEP § 602](#) *et seq.* for additional information regarding formal requirements of affidavits.

[37 CFR 1.68](#) permits a declaration to be used instead of an affidavit. The declaration must include an acknowledgment by the declarant that willful false statements and the like are punishable by fine or imprisonment, or both ([18 U.S.C. 1001](#)) and may jeopardize the validity of the application or any patent issuing thereon. The declarant must set forth in the body of the declaration that all statements made of the declarant's own knowledge are true and that all statements made on information and belief are believed to be true.

Form paragraph [7.65](#) or [7.66](#) and any of form paragraphs [7.66.01](#) through [7.66.05](#), as appropriate, should be used to comment on a [37 CFR 1.132](#) affidavit or declaration.

¶ 7.65 Affidavit or Declaration Under 37 CFR 1.132: Effective To Withdraw Rejection

The [1] under [37 CFR 1.132](#) filed [2] is sufficient to overcome the rejection of claim [3] based upon [4].

Examiner Note:

- In bracket 1, insert either --affidavit-- or --declaration--.
- In bracket 2, insert the filing date of the affidavit or declaration.
- In bracket 3, insert the affected claim or claims.
- In bracket 4, indicate the rejection that has been overcome, including the statutory grounds, e.g.: insufficiency of disclosure under [35 U.S.C. 112\(a\)](#) or [pre-AIA 35 U.S.C. 112](#), first paragraph; lack of utility under [35 U.S.C. 101](#); inoperativeness under [35 U.S.C. 101](#); a specific reference applied under [35 U.S.C. 103](#); etc. See [MPEP § 716](#).

¶ 7.66 Affidavit or Declaration Under 37 CFR 1.132: Insufficient

The [1] under [37 CFR 1.132](#) filed [2] is insufficient to overcome the rejection of claim [3] based upon [4] as set forth in the last Office action because:

Examiner Note:

- In bracket 1, insert either --affidavit-- or --declaration--.
- In bracket 2, insert the filing date of the affidavit or declaration.
- In bracket 3, insert the claim or claims affected.
- In bracket 4, indicate the rejection that has not been overcome, including the statutory grounds, i.e.: insufficiency of disclosure under [35 U.S.C. 112\(a\)](#) or [pre-AIA 35 U.S.C. 112](#), first paragraph; lack of utility and/or inoperativeness under [35 U.S.C. 101](#); a specific reference applied under [35 U.S.C. 103](#); etc. See [MPEP § 716](#).
- Following this form paragraph, set forth the reasons for the insufficiency; e.g., categories include: --untimely--; --

706.02(b)-[Reserved]

- 706.02(b)(1)-[Reserved]
- 706.02(b)(2)-[Reserved]
- 706.02(c)-[Reserved]
- 706.02(c)(1) -[Reserved]
- 706.02(c)(2)-[Reserved]

- 706.02(d)-[Reserved]
- 706.02(e)-[Reserved]
- 706.02(f)-[Reserved]
- 706.02(f)(1)-[Reserved]
- 706.02(f)(2)-[Reserved]

- 706.02(g)-[Reserved]
- 706.02(h)-[Reserved]
- 706.02(i)-[Reserved]
- 706.02(j)-[Reserved]
- 706.02(k)-[Reserved]

- 706.02(l)-[Reserved]
- 706.02(l)(1)-[Reserved]
- 706.02(l)(2)-[Reserved]
- 706.02(l)(3)-[Reserved]
- 706.02(m)-[Reserved]

706.02(n)-[Reserved]

706.03-Rejections Not Based on Prior Art

- 706.03(a)-[Reserved]
- 706.03(b)-[Reserved]
- 706.03(c)-[Reserved]
- 706.03(d)-[Reserved]
- 706.03(e)-[Reserved]
- 706.03(f) - 706.03(j)-[Reserved]
- 706.03(k)-[Reserved]
- 706.03(l) - 706.03(n)-[Reserved]
- 706.03(o)-[Reserved]
- 706.03(p) - 706.03(r)-[Reserved]
- 706.03(s)-[Reserved]
- 706.03(t)-[Reserved]
- 706.03(u)-[Reserved]
- 706.03(v)-[Reserved]
- 706.03(w)-[Reserved]
- 706.03(x)-[Reserved]
- 706.03(y)-[Reserved]

706.04-Rejection of Previously Allowed Claims

706.05-Rejection After Allowance of Application

706.06-Rejection of Claims Copied From Patent

706.07-Final Rejection

706.07(a)-Final Rejection, When Proper on Second Action

706.07(b)-Final Rejection, When Proper on First Action

706.07(c)-Final Rejection, Premature

706.07(d)-Final Rejection, Withdrawal of, Premature

706.07(e)-Withdrawal of Final Rejection, General

706.07(f)-Time for Reply to Final

fails to set forth facts--; --facts presented are not germane to the rejection at issue--;--showing is not commensurate in scope with the claims--; etc. See [MPEP § 716](#). Also include a detailed explanation of the reasons why the affidavit or declaration is insufficient. Any of form paragraphs [7.66.01](#) - [7.66.05](#) may be used, as appropriate.

¶ 7.66.01 Reason Why Affidavit or Declaration Under 37 CFR 1.132 Is Insufficient: Affiant Has Never Seen Invention Before

It includes statements which amount to an affirmation that the affiant has never seen the claimed subject matter before. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See [MPEP § 716](#).

Examiner Note:

1. This form paragraph must be preceded by form paragraph [7.66](#).
2. A full explanation must be provided, if appropriate.

¶ 7.66.02 Reason Why Affidavit or Declaration Under 37 CFR 1.132 Is Insufficient: Invention Works as Intended

It includes statements which amount to an affirmation that the claimed subject matter functions as it was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See [MPEP § 716](#).

Examiner Note:

1. This form paragraph must be preceded by form paragraph [7.66](#).
2. A full explanation must be provided, if appropriate.

¶ 7.66.03 Reason Why Affidavit or Declaration Under 37 CFR 1.132 Is Insufficient: Refers Only to Invention, Not to Claims

It refers only to the system described in the above referenced application and not to the individual claims of the application. As such the declaration does not show that the objective evidence of nonobviousness is commensurate in scope with the claims. See [MPEP § 716](#).

Examiner Note:

1. This form paragraph must be preceded by form paragraph [7.66](#).
2. A full explanation must be provided, if appropriate.

¶ 7.66.04 Reason Why Affidavit or Declaration Under 37 CFR 1.132 Is Insufficient: No Evidence of Long-Felt Need

It states that the claimed subject matter solved a problem that was long standing in the art. However, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See [MPEP § 716.04](#).

Examiner Note:

1. This form paragraph must be preceded by form paragraph [7.66](#).
2. A full explanation must be provided, if appropriate.

¶ 7.66.05 Reason Why Affidavit or Declaration Under 37 CFR 1.132 Is Insufficient: Conclusion

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Examiner Note:

This form paragraph should be presented as a conclusion to your explanation of why the affidavit or declaration under [37 CFR 1.132](#) is insufficient, and it must be preceded by form paragraph [7.66](#).

716.01 Generally Applicable Criteria [R-08.2012]

The following criteria are applicable to all evidence traversing rejections submitted by applicants, including affidavits or declarations submitted under [37 CFR 1.132](#):

(A) *Timeliness*.

Rejection
706.07(g)-Transitional After-Final Practice 706.07(h)-Request for Continued Examination (RCE) Practice
707-Examiner's Letter or Action
707.01-Primary Examiner Indicates Action for New Assistant 707.02-Applications Up for Third Action and 5-Year Applications 707.03-707.04-[Reserved] 707.05-Citation of References 707.05(a)-Copies of Cited References 707.05(b)-Citation of Related Art and Information by Applicants 707.05(c)-Order of Listing 707.05(d)-Reference Cited in Subsequent Actions 707.05(e)-Data Used in Citing References 707.05(f)-Non-Patent Documents Having a Lengthy Citation 707.05(g)-Incorrect Citation of References 707.06-Citation of Decisions, Orders Memorandums, and Notices 707.07-Completeness and Clarity of Examiner's Action 707.07(a)-Complete Action on Formal Matters 707.07(b) - 707.07(c)-[Reserved] 707.07(d)-Language To Be Used in Rejecting Claims 707.07(e)-Note All Outstanding Requirements 707.07(f)-Answer All Material Traversed 707.07(g)-Piecemeal Examination 707.07(h)-Notify of Inaccuracies in Amendment 707.07(i)-Each Claim To Be Mentioned in Each Office Action 707.07(j)-State When Claims Are Allowable 707.07(k)-Numbering Paragraphs 707.07(l)-Comment on Examples 707.08-Reviewing and Initialing by Assistant Examiner 707.09-Signing by Primary or Other Authorized Examiner 707.10-Entry 707.11-Date 707.12-Mailing 707.13-Returned Office Action
708-Order of Examination
708.01-List of Special Cases 708.02-Petition To Make Special 708.02(a)-Accelerated Examination 708.02(b)-Prioritized Examination 708.02(c)-Patent Prosecution Highway Program 708.03-Examiner Tenders Resignation
709-Suspension of Action
709.01-Overlapping Applications by Same Applicant or Owned by Same Assignee

Evidence traversing rejections must be timely or seasonably filed to be entered and entitled to consideration. *In re Rothermel*, 276 F.2d 393, 125 USPQ 328 (CCPA 1960).

Affidavits and declarations submitted under [37 CFR 1.132](#) and other evidence traversing rejections are considered timely if submitted:

- (1) prior to a final rejection,
- (2) before appeal in an application not having a final rejection,
- (3) after final rejection, but before or on the same date of filing an appeal, upon a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented in compliance with [37 CFR 1.116\(e\)](#); or
- (4) after the prosecution is closed (e.g., after a final rejection, after appeal, or after allowance) if applicant files the affidavit or other evidence with a request for continued examination (RCE) under [37 CFR 1.114](#) in a utility or plant application filed on or after June 8, 1995; or a continued prosecution application (CPA) under [37 CFR 1.53\(d\)](#) in a design application.

For affidavits or declarations under [37 CFR 1.132](#) filed after appeal, see [37 CFR 41.33\(d\)](#) and [MPEP § 1206 and § 1211.03](#).

(B) *Consideration of evidence.*

Evidence traversing rejections, when timely presented, must be considered by the examiner whenever present. All entered affidavits, declarations, and other evidence traversing rejections are acknowledged and commented upon by the examiner in the next succeeding action. The extent of the commentary depends on the action taken by the examiner. Where an examiner holds that the evidence is sufficient to overcome the *prima facie* case, the comments should be consistent with the guidelines for statements of reasons for allowance. See [MPEP § 1302.14](#). Where the evidence is insufficient to overcome the rejection, the examiner must specifically explain why the evidence is insufficient. General statements such as "the declaration lacks technical validity" or "the evidence is not commensurate with the scope of the claims" without an explanation supporting such findings are insufficient.

716.01(a) Objective Evidence of Nonobviousness [R-08.2017]

OBJECTIVE EVIDENCE MUST BE CONSIDERED WHEN TIMELY PRESENT

Affidavits or declarations, when timely presented, containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., must be considered by the examiner in determining the issue of obviousness of claims for patentability under [35 U.S.C. 103](#). The Court of Appeals for the Federal Circuit stated in *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983) that "evidence rising out of the so-called 'secondary considerations' must always when present be considered en route to a determination of obviousness." Such evidence might give light to circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or unobviousness, such evidence may have relevancy. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966); *In re Palmer*, 451 F.2d 1100, 172 USPQ 126 (CCPA 1971); *In re Fielder*, 471 F.2d 640, 176 USPQ 300 (CCPA 1973). The *Graham v. John Deere* pronouncements on the relevance of commercial success, etc. to a determination of obviousness were not negated in *Sakraida v. Ag Pro*, 425 U.S. 273, 189 USPQ 449 (1976) or *Anderson's-Black Rock Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 163 USPQ 673 (1969), where reliance was placed upon *A&P Tea Co. v. Supermarket Corp.*, 340 U.S. 147, 87 USPQ 303 (1950). See *Dann v. Johnston*, 425 U.S. 219, 226 n.4, 189 USPQ 257, 261 n. 4 (1976).

Examiners must consider comparative data in the specification which is intended to illustrate the claimed invention in reaching a conclusion with regard to the obviousness of the claims. *In re Margolis*, 785 F.2d 1029, 228 USPQ 940 (Fed. Cir. 1986). The lack of objective evidence of nonobviousness does not weigh in favor of obviousness. *Miles Labs. Inc. v. Shandon Inc.*, 997 F.2d 870, 878, 27 USPQ2d 1123, 1129 (Fed. Cir. 1993), *cert. denied*, 127 L. Ed. 232 (1994). However, where a *prima facie* case of obviousness is established, the failure to provide rebuttal evidence is dispositive.

716.01(b) Nexus Requirement and Evidence of Nonobviousness [R-07.2022]

TO BE OF PROBATIVE VALUE, ANY SECONDARY EVIDENCE MUST BE RELATED TO THE CLAIMED INVENTION (NEXUS REQUIRED)

The weight attached to evidence of secondary considerations by the examiner will depend upon its relevance to the issue of obviousness and the amount and nature of the evidence. Note the great reliance apparently placed on this type of evidence by the Supreme Court in upholding the patent in *United States v. Adams*, 383 U.S. 39, 148 USPQ 479 (1966).

To be given substantial weight in the determination of obviousness or nonobviousness, evidence of secondary considerations must be relevant to the subject matter as claimed, and therefore the examiner must determine whether there is a nexus between the merits of the claimed invention and the evidence of secondary considerations. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42, 227 USPQ 657, 673-674 n. 42 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1017 (1986). The term "nexus" designates a factually and legally sufficient connection between the objective evidence of nonobviousness and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir.), *cert. denied*, 488 U.S. 956 (1988).

Nexus is presumed when the asserted objective evidence of record is tied to a certain product and that product includes the claimed features, and is coextensive with them. *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373, 2019 USPQ2d 483355 (Fed. Cir. 2019), *cert. denied*, 141 S.Ct. 373 (2020). "[T]he purpose of the coextensiveness requirement is to ensure that nexus is only presumed when the product tied to the evidence of secondary considerations 'is the invention disclosed and claimed.'" *Id.* at 1374 (quoting *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392, 7 USPQ2d 1222, 1226 (Fed. Cir. 1988)). "[T]he degree of correspondence between a product and the patent claim falls along a spectrum. At one end of the spectrum lies perfect or near perfect correspondence. At the other end lies no or very little correspondence." *Id.* "A patent claim is not coextensive with a product that includes a 'critical' unclaimed feature that is claimed by a different patent and that materially impacts the product's functionality." *Id.* at 1375.

710-Period for Reply
710.01-Statutory Period
710.01(a)-Statutory Period, How Computed
710.02-Shortened Statutory Period and Time Limit Actions Computed
710.02(a)-[Reserved]
710.02(b)-Shortened Statutory Period: Situations in Which Used
710.02(c)-Specified Time Limits: Situations in Which Used
710.02(d)-Difference Between Shortened Statutory Periods for Reply and Specified Time Limits
710.02(e)-Extension of Time
710.03-[Reserved]
710.04-Two Periods Running
710.04(a)-Copying Patent Claims
710.05-Period Ending on Saturday, Sunday, or a Federal Holiday
710.06-Situations When Reply Period Is Reset or Restarted
711-Abandonment of Patent Application
711.01-Express or Formal Abandonment
711.02-Failure To Take Required Action During Statutory Period
711.02(a)-Insufficiency of Reply
711.02(b)-Special Situations Involving Abandonment
711.02(c)-Termination of Proceedings
711.03-Reconsideration of Holding of Abandonment; Revival
711.03(a)-Holding Based on Insufficiency of Reply
711.03(b)-Holding Based on Failure To Reply Within Period
711.03(c)-Petitions Relating to Abandonment
711.03(d)-Examiner's Statement on Petition To Set Aside Examiner's Holding
711.04-Public Access to Abandoned Applications
711.04(a)-Date of Abandonment
711.04(b)-Ordering of Patented and Abandoned Files
711.04(c)-Notifying Applicants of Abandonment
711.05-Letter of Abandonment Received After Application Is Allowed
711.06-Abstracts, Abbreviations, and Defensive Publications
711.06(a)-Citation and Use of Abstracts, Abbreviations, and Defensive Publications as References
712-[Reserved]
713-Interviews
713.01-General Policy, How Conducted
713.02-Interviews Prior to First Official Action
713.03-Interview for "Sounding Out" Examiner Not Permitted
713.04-Substance of Interview Must Be Made of Record

Even if there is no presumption of nexus, the consideration of the rebuttal evidence does not end. "To the contrary, the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the 'direct result of the unique characteristics of the claimed invention.'" *Id.* at 1373-74 (quoting *In re Huang*, 100 F.3d 135, 140, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996)). "Where the offered secondary consideration actually results from something other than what is both claimed and novel in the claim, there is no nexus to the merits of the claimed invention," meaning that "there must be a nexus to some aspect of the claim not already in the prior art." *In re Kao*, 639 F.3d 1057, 1068-69, 98 USPQ2d 1799, 1808 (Fed. Cir. 2011) (emphasis in original). On the other hand, there is no requirement that "objective evidence must be tied exclusively to claim elements that are not disclosed in a particular prior art reference in order for that evidence to carry substantial weight." *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331, 119 USPQ2d 1301, 1308 (Fed. Cir. 2016). A patent owner may show, for example, "that it is the claimed combination as a whole that serves as a nexus for the objective evidence; proof of nexus is not limited to only when objective evidence is tied to the supposedly 'new' feature(s)." 639 F.3d at 1330. Ultimately, the fact finder must weigh the secondary considerations evidence presented in the context of whether the claimed invention as a whole would have been obvious to a skilled artisan. 639 F.3d at 1331-32. *Fox Factory, Inc. v. SRAM, LLC*, 813 Fed. Appx. 539, 542-43, 2020 USPQ2d 10546 (Fed. Cir. 2020) (the record has substantial evidence to support nexus and nonobviousness based on secondary considerations regarding industry skepticism and subsequent praise and long-felt need because it was shown that the underlying product's success was attributed to the allegedly obvious claim feature). *Campbell Soup Co. v. Gamon Plus, Inc.*, 10 F.4th 1268, 1279, 2021 USPQ2d 875 (Fed. Cir. 2021) (internal quotation marks omitted) ("[T]he obviousness analysis involves determining whether 'the claimed invention as a whole would have been obvious[' (quoting **35 U.S.C. 103**)], and yet we still require a link to the claimed invention's unique characteristics in that context. We therefore hold that, as in the utility patent context, objective indicia must be linked to a design patent claim's unique characteristics."). See also *Teva Pharms. Int'l GmbH v. Eli Lilly & Co.*, 8 F.4th 1349, 2021 USPQ2d 866 (Fed. Cir. 2021).

"Where the offered secondary consideration actually results from something other than what is both claimed and novel in the claim, there is no nexus to the merits of the claimed invention." *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011); see also *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011) ("If commercial success is due to an element in the prior art, no nexus exists."); *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (2006) ("[I]f the feature that creates the commercial success was known in the prior art, the success is not pertinent."). In evaluating whether the requisite nexus exists, the identified objective indicia must be directed to what was not known in the prior art, including patents and publications, which may well be the novel combination or arrangement of known individual elements. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-19 (2007); *Veritas Techs. LLC v. Veeam Software Corp.*, 835 F.3d 1406, 1414-15 (Fed. Cir. 2016).

716.01(c) Probative Value of Objective Evidence [R-10.2019]

I. TO BE OF PROBATIVE VALUE, ANY OBJECTIVE EVIDENCE SHOULD BE SUPPORTED BY ACTUAL PROOF
Objective evidence which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the inventor or at least one joint inventor. See, for example, *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984) ("It is well settled that unexpected results must be established by factual evidence." "[A]ppellants have not presented any experimental data showing that prior heat-shrinkable articles split. Due to the absence of tests comparing appellant's heat shrinkable articles with those of the closest prior art, we conclude that appellant's assertions of unexpected results constitute mere argument."). See also *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); *Ex parte George*, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991).

II. ATTORNEY ARGUMENTS CANNOT TAKE THE PLACE OF EVIDENCE
The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration include statements regarding unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the inventor or at least one joint inventor.

See **MPEP § 2145** generally for case law pertinent to the consideration of applicant's rebuttal arguments.

III. OPINION EVIDENCE
Although factual evidence is preferable to opinion testimony, such testimony is entitled to consideration and some weight so long as the opinion is not on the ultimate legal conclusion at issue. While an opinion as to a legal conclusion is not entitled to any weight, the underlying basis for the opinion may be persuasive. *In re Chilowsky*, 306 F.2d 908, 134 USPQ 515 (CCPA 1962) (expert opinion that an application meets the requirements of **35 U.S.C. 112** is not entitled to any weight; however, facts supporting a basis for deciding that the specification complies with **35 U.S.C. 112** are entitled to some weight); *In re Lindell*, 385 F.2d 453, 155 USPQ 521 (CCPA 1967) (Although an affiant's or declarant's opinion on the ultimate legal issue is not evidence in the case, "some weight ought to be given to a persuasively supported statement of one skilled in the art on what was not obvious to him." 385 F.2d at 456, 155 USPQ at 524 (emphasis in original)).

In assessing the probative value of an expert opinion, the examiner must consider the nature of the matter sought to be established, the strength of any opposing evidence, the interest of the expert in the outcome of the case, and the presence or absence of factual support for the expert's opinion. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1017 (1986). See also *In re Oelrich*, 579 F.2d 86, 198 USPQ 210 (CCPA 1978) (factually based expert opinions on the level of ordinary skill in the art were sufficient to rebut the *prima facie* case of obviousness); *Ex parte Gray*, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989) (statement in publication dismissing the "preliminary identification of a human b-NGF-like molecule" in the prior art, even if considered to be an expert opinion, was inadequate to overcome the rejection based on that prior art because there was no factual evidence supporting the statement); *In re Carroll*, 601 F.2d 1184, 202 USPQ 571 (CCPA 1979) (expert opinion on what the prior art taught, supported by documentary evidence and formulated prior to the making of the claimed invention, received considerable deference); *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992) (declarations of seven persons skilled in the art offering opinion evidence praising the merits of the claimed invention were found to have little value because of a lack of

- 713.05-Interviews Prohibited or Granted, Special Situations
- 713.06-No Inter Partes Questions Discussed Ex Parte
- 713.07-Exposure of Other Cases
- 713.08-Demonstration, Exhibits, Models
- 713.09-Interviews Between Final Rejection and Notice of Appeal
- 713.10-Interview Preceding Filing Amendment Under 37 CFR 1.312

714-Amendments, Applicant's Action

- 714.01-Signatures to Amendments
 - 714.01(a)-Unsigned or Improperly Signed Amendment
 - 714.01(b)-[Reserved]
 - 714.01(c)-Signed by Attorney or Agent Not of Record
 - 714.01(d)-Amendment Signed by Applicant but Not by Attorney or Agent of Record
 - 714.01(e)-Amendments Before First Office Action
- 714.02-Must Be Fully Responsive
- 714.03-Amendments Not Fully Responsive, Action To Be Taken
 - 714.03(a)-Supplemental Amendment
- 714.04-Claims Presented in Amendment With No Attempt To Point Out Patentable Novelty
- 714.05-Examiner Should Immediately Review
- 714.06-[Reserved]
- 714.07-Amendments Not in Permanent Ink
- 714.08-714.09-[Reserved]
- 714.10-Claims Added in Excess of Claims Previously Paid For
- 714.11-Amendment Filed During Interference Proceedings
- 714.12-Amendments and Other Replies After Final Rejection or Action
- 714.13-Amendments and Other Replies After Final Rejection or Action, Procedure Followed
- 714.14-Amendments After Allowance of All Claims
- 714.15-Amendment Received in Technology Center After Mailing of Notice of Allowance
- 714.16-Amendment After Notice of Allowance, 37 CFR 1.312
 - 714.16(a)-Amendments Under 37 CFR 1.312, Copied Patent Claims
 - 714.16(b)-Amendments Under 37 CFR 1.312 Filed With a Motion Under 37 CFR 41.208
 - 714.16(c)-Amendments Under 37 CFR 1.312, Additional Claims
 - 714.16(d)-Amendments Under 37 CFR 1.312, Handling
 - 714.16(e)-Amendments Under 37 CFR 1.312, Entry in Part
- 714.17-Amendment Filed After the Period for Reply Has Expired
- 714.18-Entry of Amendments
- 714.19-List of Amendments, Entry Denied
- 714.20-List of Amendments Entered in Part

factual support); *Ex parte George*, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991) (conclusory statements that results were "unexpected," unsupported by objective factual evidence, were considered but were not found to be of substantial evidentiary value).

Although an affidavit or declaration which states only conclusions may have some probative value, such an affidavit or declaration may have little weight when considered in light of all the evidence of record in the application. *In re Brandstadter*, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973).

An affidavit of an applicant as to the advantages of his or her claimed invention, while less persuasive than that of a disinterested person, cannot be disregarded for this reason alone. *Ex parte Keyes*, 214 USPQ 579 (Bd. App. 1982); *In re McKenna*, 203 F.2d 717, 97 USPQ 348 (CCPA 1953).

IV. PROBATIVE VALUE OF COMMERCIAL SUCCESS OR LONG FELT NEED EVIDENCE

Objective evidence of commercial success or long felt need and failure of others may be given less weight if the record shows that the applicant or patent owner has a strong market power or blocking patent depending on the facts of record. "A patent has been called a 'blocking patent' where practice of a later invention would infringe the earlier patent. The existence of such a blocking patent may deter non-owners and non-licensees from investing the resources needed to make, develop, and market such a later, 'blocked' invention, because of the risk of infringement liability and associated monetary or injunctive remedies. If the later invention is eventually patented by an owner or licensee of the blocking patent, that potential deterrent effect is relevant to understanding why others had not made, developed, or marketed that 'blocked' invention and, hence, to evaluating objective indicia of the obviousness of the later patent." *Acorda Therapeutics, Inc. v. Roxane Lab., Inc.*, 903 F.3d 1310, 1337, 128 USPQ2d 1001, 1021(Fed. Cir. 2018). "Such a blocking patent therefore can be evidence that can discount the significance of evidence that nobody but the blocking patent's owners or licensees arrived at, developed, and marketed the invention covered by the later patent at issue in litigation. But the magnitude of the diminution in incentive in any context—in particular, whether it was great enough to have actually deterred activity that otherwise would have occurred—is 'a fact-specific inquiry.'" *Id.* at 1339, 128 USPQ2d at 1022. While having record evidence of such a blocking patent may not be common, examiners should be aware of its potential impact in evaluating secondary evidence of nonobviousness. In any Office action, examiners should articulate why there is any discounting of the weight of the secondary consideration evidence when addressing the evidence.

716.01(d) Weighing Objective Evidence [R-08.2012]

IN MAKING A FINAL DETERMINATION OF PATENTABILITY, EVIDENCE SUPPORTING PATENTABILITY MUST BE WEIGHED AGAINST EVIDENCE SUPPORTING PRIMA FACIE CASE

When an applicant timely submits evidence traversing a rejection, the examiner must reconsider the patentability of the claimed invention. The ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The submission of objective evidence of patentability does not mandate a conclusion of patentability in and of itself. *In re Chupp*, 816 F.2d 643, 2 USPQ2d 1437 (Fed. Cir. 1987). Facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion of a *prima facie* case was reached, not against the conclusion itself. *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990). In other words, each piece of rebuttal evidence should not be evaluated for its ability to knockdown the *prima facie* case. All of the competent rebuttal evidence taken as a whole should be weighed against the evidence supporting the *prima facie* case. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Although the record may establish evidence of secondary considerations which are indicia of nonobviousness, the record may also establish such a strong case of obviousness that the objective evidence of nonobviousness is not sufficient to outweigh the evidence of obviousness. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 769, 9 USPQ2d 1417, 1427 (Fed. Cir. 1988), *cert. denied*, 493 U.S. 814 (1989); *Richardson-Vicks, Inc., v. The Upjohn Co.*, 122 F.3d 1476, 1484, 44 USPQ2d 1181, 1187 (Fed. Cir. 1997) (showing of unexpected results and commercial success of claimed ibuprofen and pseudoephedrine combination in single tablet form, while supported by substantial evidence, held not to overcome strong *prima facie* case of obviousness). See *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984) for a detailed discussion of the proper roles of the examiner's *prima facie* case and applicant's rebuttal evidence in the final determination of obviousness.

If, after evaluating the evidence, the examiner is still not convinced that the claimed invention is patentable, the next Office action should include a statement to that effect and identify the reason(s) (e.g., evidence of commercial success not convincing, the commercial success not related to the technology, etc.). See *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir.), *cert. denied*, 488 U.S. 956 (1988). See also **MPEP § 716.01**. See **MPEP § 2145** for guidance in determining whether rebuttal evidence is sufficient to overcome a *prima facie* case of obviousness.

716.02 Allegations of Unexpected Results [R-08.2012]

Any differences between the claimed invention and the prior art may be expected to result in some differences in properties. The issue is whether the properties differ to such an extent that the difference is really unexpected. *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (differences in sedative and anticholinergic effects between prior art and claimed antidepressants were not unexpected). In *In re Waymouth*, 499 F.2d 1273, 1276, 182 USPQ 290, 293 (CCPA 1974), the court held that unexpected results for a claimed range as compared with the range disclosed in the prior art had been shown by a demonstration of "a marked improvement, over the results achieved under other ratios, as to be classified as a difference in kind, rather than one of degree." Compare *In re Wagner*, 371 F.2d 877, 884, 152 USPQ 552, 560 (CCPA 1967) (differences in properties cannot be disregarded on the ground they are differences in degree rather than in kind); *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992) ("we generally consider a discussion of results in terms of 'differences in degree' as compared to 'differences in kind' . . . to have very little meaning in a relevant legal sense").

716.02(a) Evidence Must Show Unexpected Results [R-07.2022]

I. GREATER THAN EXPECTED RESULTS ARE EVIDENCE OF NONOBVIOUSNESS

"A greater than expected result is an evidentiary factor pertinent to the legal conclusion of obviousness ... of the claims at issue." *In re Corkill*, 771 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985). In *Corkhill*, the claimed combination showed an additive result when a diminished result would have been expected. This result was persuasive of nonobviousness even

- 714.21-Amendments Inadvertently Entered, No Legal Effect
- 714.22-714.24-[Reserved]
- 714.25-Discourtesy of Applicant or Attorney

715-Swearing Behind a Reference — Affidavit or Declaration Under 37 CFR 1.131(a)

- 715.01-37 CFR 1.131(a) Affidavits Versus 37 CFR 1.132 Affidavits
 - 715.01(a)-Reference Is a Patent or Published Application Naming Different Inventive Entity With at Least One Common Inventor
 - 715.01(b)-Reference and Application Have Common Assignee
 - 715.01(c)-Reference Is Publication of Inventor's Own Invention
 - 715.01(d)-Activities Applied Against the Claims
- 715.02-How Much of the Claimed Invention Must Be Shown, Including the General Rule as to Generic Claims
- 715.03-Genus-Species, Practice Relative to Cases Where Predictability Is in Question
- 715.04-Who May Make Affidavit or Declaration Under 37 CFR 1.131(a); Formal Requirements of Affidavits and Declarations
- 715.05-U.S. Patent or Application Publication Claiming Same Invention
- 715.06-[Reserved]
- 715.07-Facts and Documentary Evidence
 - 715.07(a)-Diligence
 - 715.07(b)-Interference Testimony Sometimes Used
 - 715.07(c)-Acts Relied Upon Must Have Been Carried Out in This Country or a NAFTA or WTO Member Country
 - 715.07(d)-Disposition of Exhibits
- 715.08-Decided by Primary Examiner
- 715.09-Timely Presentation
- 715.10-Review of Affidavit or Declaration for Evidence of Prior Public Use or Sale or Failure to Disclose Best Mode

716-Affidavits or Declarations Under 37 CFR 1.132 and Other Evidence Traversing Rejections

- 716.01-Generally Applicable Criteria
 - 716.01(a)-Objective Evidence of Nonobviousness
 - 716.01(b)-Nexus Requirement and Evidence of Nonobviousness
 - 716.01(c)-Probative Value of Objective Evidence
 - 716.01(d)-Weighing Objective Evidence
- 716.02-Allegations of Unexpected Results
 - 716.02(a)-Evidence Must Show Unexpected Results
 - 716.02(b)-Burden on Applicant
 - 716.02(c)-Weighing Evidence of Expected and Unexpected Results
 - 716.02(d)-Unexpected Results Commensurate in Scope With Claimed Invention
 - 716.02(e)-Comparison With Closest Prior Art
 - 716.02(f)-Advantages Disclosed or Inherent
 - 716.02(g)-[Reserved]

though the result was equal to that of one component alone. Evidence of a greater than expected result may also be shown by demonstrating an effect which is greater than the sum of each of the effects taken separately (i.e., demonstrating "synergism"). *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). However, a greater than additive effect is not necessarily sufficient to overcome a *prima facie* case of obviousness because such an effect can either be expected or unexpected. Applicants must further show that the results were greater than those which would have been expected from the prior art to an unobvious extent, and that the results are of a significant, practical advantage. *Ex parte The NutraSweet Co.*, 19 USPQ2d 1586 (Bd. Pat. App. & Inter. 1991) (Evidence showing greater than additive sweetness resulting from the claimed mixture of saccharin and L-aspartyl-L-phenylalanine was not sufficient to outweigh the evidence of obviousness because the teachings of the prior art lead to a general expectation of greater than additive sweetening effects when using mixtures of synthetic sweeteners.).

II. SUPERIORITY OF A PROPERTY SHARED WITH THE PRIOR ART IS EVIDENCE OF NONOBVIOUSNESS

Evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. "Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness." No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987) (Evidence showing that the claimed herbicidal compound was more effective than the closest prior art compound in controlling quackgrass and yellow nutsedge weeds in corn and soybean crops was sufficient to overcome the rejection under [35 U.S.C. 103](#), even though the specification indicated the claimed compound was an average performer on crops other than corn and soybean.). See also *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990) (unexpected superior therapeutic activity of claimed compound against anaerobic bacteria was sufficient to rebut *prima facie* obviousness even though there was no evidence that the compound was effective against all bacteria).

III. PRESENCE OF AN UNEXPECTED PROPERTY IS EVIDENCE OF NONOBVIOUSNESS

Presence of a property not possessed by the prior art is evidence of nonobviousness. *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (rejection of claims to compound structurally similar to the prior art compound was reversed because claimed compound unexpectedly possessed anti-inflammatory properties not possessed by the prior art compound); *Ex parte Thumm*, 132 USPQ 66 (Bd. App. 1961) (Appellant showed that the claimed range of ethylene diamine was effective for the purpose of producing "regenerated cellulose consisting substantially entirely of skin" whereas the prior art warned "this compound has 'practically no effect.'"). The submission of evidence that a new product possesses unexpected properties does not necessarily require a conclusion that the claimed invention is nonobvious. *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979). See the discussion of latent properties and additional advantages in [MPEP § 2145](#).

IV. ABSENCE OF AN EXPECTED PROPERTY IS EVIDENCE OF NONOBVIOUSNESS

Absence of property which a claimed invention would have been expected to possess based on the teachings of the prior art is evidence of unobviousness. *Ex parte Mead Johnson & Co.*, 227 USPQ 78 (Bd. Pat. App. & Inter. 1985) (Based on prior art disclosures, claimed compounds would have been expected to possess beta-andrenergic blocking activity; the fact that claimed compounds did not possess such activity was an unexpected result sufficient to establish unobviousness within the meaning of [35 U.S.C. 103](#)).

716.02(b) Burden on Applicant [R-08.2012]

I. BURDEN ON APPLICANT TO ESTABLISH RESULTS ARE UNEXPECTED AND SIGNIFICANT

The evidence relied upon should establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance." *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992) (Mere conclusions in appellants' brief that the claimed polymer had an unexpectedly increased impact strength "are not entitled to the weight of conclusions accompanying the evidence, either in the specification or in a declaration."); *Ex parte C*, 27 USPQ2d 1492 (Bd. Pat. App. & Inter. 1992) (Applicant alleged unexpected results with regard to the claimed soybean plant, however there was no basis for judging the practical significance of data with regard to maturity date, flowering date, flower color, or height of the plant.). See also *In re Nolan*, 553 F.2d 1261, 1267, 193 USPQ 641, 645 (CCPA 1977) and *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) as discussed in [MPEP § 716.02\(c\)](#).

II. APPLICANTS HAVE BURDEN OF EXPLAINING PROFFERED DATA

"[A]ppellants have the burden of explaining the data in any declaration they proffer as evidence of non-obviousness." *Ex parte Ishizaka*, 24 USPQ2d 1621, 1624 (Bd. Pat. App. & Inter. 1992).

III. DIRECT AND INDIRECT COMPARATIVE TESTS ARE PROBATIVE OF NONOBVIOUSNESS

Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention with the closest prior art which is commensurate in scope with the claims. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and [MPEP § 716.02\(d\)](#) - [§ 716.02\(e\)](#). See *In re Blondel*, 499 F.2d 1311, 1317, 182 USPQ 294, 298 (CCPA 1974) and *In re Fouché*, 439 F.2d 1237, 1241-42, 169 USPQ 429, 433 (CCPA 1971) for examples of cases where indirect comparative testing was found sufficient to rebut a *prima facie* case of obviousness.

The patentability of an intermediate may be established by unexpected properties of an end product "when one of ordinary skill in the art would reasonably ascribe to a claimed intermediate the 'contributing cause' for such an unexpectedly superior activity or property." *In re Magerlein*, 602 F.2d 366, 373, 202 USPQ 473, 479 (CCPA 1979). "In order to establish that the claimed intermediate is a 'contributing cause' of the unexpectedly superior activity or property of an end product, an applicant must identify the cause of the unexpectedly superior activity or property (compared to the prior art) in the end product and establish a nexus for that cause between the intermediate and the end product." *Id.* at 479.

716.02(c) Weighing Evidence of Expected and Unexpected Results [R-08.2012]

I. EVIDENCE OF UNEXPECTED AND EXPECTED PROPERTIES MUST BE WEIGHED

Evidence of unexpected results must be weighed against evidence supporting *prima facie* obviousness in making a final determination of the obviousness of the claimed invention. *In re May*, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (Claims directed to a method of effecting analgesia without producing physical dependence by administering the levo isomer of a compound having a certain chemical structure were rejected as obvious over the prior art. Evidence that the compound was unexpectedly nonaddictive was sufficient to overcome the obviousness rejection. Although the compound also had the

716.03-Commercial Success
716.03(a)-Commercial Success Commensurate in Scope With Claimed Invention
716.03(b)-Commercial Success Derived From Claimed Invention
716.04-Long-Felt Need and Failure of Others
716.05-Skepticism of Experts
716.06-Copying
716.07-Inoperability of References
716.08-Utility and Operability of Applicant's Disclosure
716.09-Sufficiency of Disclosure
716.10-Attribution Affidavit or Declaration to Overcome Rejection Under Pre-AIA 35 U.S.C. 102 or 103
717-Prior Art Exceptions under AIA 35 U.S.C. 102(b)(1) and (2)
717.01-Affidavit or Declaration Under 37 CFR 1.130
717.01(a) -Declarations or Affidavits under 37 CFR 1.130(a) – Attribution
717.01(a)(1) -Evaluation of Declarations or Affidavits under 37 CFR 1.130(a)
717.01(b) -Declarations or Affidavits under 37 CFR 1.130(b) – Prior Public Disclosure
717.01(b)(1) -Evaluation of Declarations or Affidavits under 37 CFR 1.130(b)
717.01(b)(2) -Determining if the Subject Matter of the Intervening Disclosure is the Same as the Subject Matter of the Inventor–Originated Prior Public Disclosure
717.01(c) -Who May Make Affidavit or Declaration; Formal Requirements of Affidavits and Declarations
717.01(d)-U.S. Patent or Application Publication Claiming Same Invention
717.01(e) -Passed Upon (or Decided by) by Primary Examiner
717.01(f) -Seasonable (or Timely) Presentation
717.02 -Prior Art Exception for Commonly Owned or Joint Research Agreement Subject Matter under AIA 35 U.S.C. 102(b)(2)(C)
717.02(a) -Invoking the Prior Art Exception under 35 U.S.C. 102(b)(2)(C)
717.02(b) -Evaluating Whether the Prior Art Exception under AIA 35 U.S.C. 102(b)(2)(C) is Properly Invoked
717.02(c) -Examination Procedure With Respect to the Prior Art Exception under AIA 35 U.S.C. 102(b)(2)(C)
717.02(d) -Form Paragraphs With Respect to the Prior Art Exception under AIA 35 U.S.C. 102(b)(2)(C)
718-Affidavit or Declaration to Disqualify Commonly Owned Patent as Prior Art, 37 CFR 1.131(c)
719-File Wrapper
719.01-Papers in Image File Wrapper
719.02-Residence of Inventor Changed
719.03-Classification During Examination
719.04-Index of Claims

expected result of potent analgesia, there was evidence of record showing that the goal of research in this area was to produce an analgesic compound which was nonaddictive, enhancing the evidentiary value of the showing of nonaddictiveness as an indicia of nonobviousness.). See **MPPE § 716.01(d)** for guidance on weighing evidence submitted to traverse a rejection.

Where the unexpected properties of a claimed invention are not shown to have a significance equal to or greater than the expected properties, the evidence of unexpected properties may not be sufficient to rebut the evidence of obviousness. *In re Nolan*, 553 F.2d 1261, 1267, 193 USPQ 641, 645 (CCPA 1977) (Claims were directed to a display/memory device which was *prima facie* obvious over the prior art. The court found that a higher memory margin and lower operating voltage would have been expected properties of the claimed device, and that a higher memory margin appears to be the most significant improvement for a memory device. Although applicant presented evidence of unexpected properties with regard to lower peak discharge current and higher luminous efficiency, these properties were not shown to have a significance equal to or greater than that of the expected higher memory margin and lower operating voltage. The court held the evidence of obviousness was not sufficient to rebut the evidence of obviousness.); *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (Evidence of improved feed efficiency in steers was not sufficient to rebut *prima facie* case of obviousness based on prior art which specifically taught the use of compound X537A to enhance weight gain in animals because the evidence did not show that a significant aspect of the claimed invention would have been unexpected.).

II. EXPECTED BENEFICIAL RESULTS ARE EVIDENCE OF OBVIOUSNESS

"Expected beneficial results are evidence of obviousness of a claimed invention, just as unexpected results are evidence of unobviousness thereof." *In re Gershon*, 372 F.2d 535, 538, 152 USPQ 602, 604 (CCPA 1967) (resultant decrease of dental enamel solubility accomplished by adding an acidic buffering agent to a fluoride containing dentifrice was expected based on the teaching of the prior art); *Ex parte Blanc*, 13 USPQ2d 1383 (Bd. Pat. App. & Inter. 1989) (Claims at issue were directed to a process of sterilizing a polyolefinic composition which contains an antioxidant with high-energy radiation. Although evidence was presented in appellant's specification showing that particular antioxidants are effective, the Board concluded that these beneficial results would have been expected because one of the references taught a claimed antioxidant is very efficient and provides better results compared with other prior art antioxidants.).

716.02(d) Unexpected Results Commensurate in Scope With Claimed Invention [R-08.2012]

Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980) (Claims were directed to a process for removing corrosion at "elevated temperatures" using a certain ion exchange resin (with the exception of claim 8 which recited a temperature in excess of 100C). Appellant demonstrated unexpected results via comparative tests with the prior art ion exchange resin at 110C and 130C. The court affirmed the rejection of claims 1-7 and 9-10 because the term "elevated temperatures" encompassed temperatures as low as 60C where the prior art ion exchange resin was known to perform well. The rejection of claim 8, directed to a temperature in excess of 100C, was reversed.). See also *In re Peterson*, 315 F.3d 1325, 1329-31, 65 USPQ2d 1379, 1382-85 (Fed. Cir. 2003) (data showing improved alloy strength with the addition of 2% rhenium did not evidence unexpected results for the entire claimed range of about 1-3% rhenium); *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983) (Claims were directed to certain catalysts containing an alkali metal. Evidence presented to rebut an obviousness rejection compared catalysts containing sodium with the prior art. The court held this evidence insufficient to rebut the *prima facie* case because experiments limited to sodium were not commensurate in scope with the claims.).

I. NONOBVIOUSNESS OF A GENUS OR CLAIMED RANGE MAY BE SUPPORTED BY DATA SHOWING UNEXPECTED RESULTS OF A SPECIES OR NARROWER RANGE UNDER CERTAIN CIRCUMSTANCES

The nonobviousness of a broader claimed range can be supported by evidence based on unexpected results from testing a narrower range if one of ordinary skill in the art would be able to determine a trend in the exemplified data which would allow the artisan to reasonably extend the probative value thereof. *In re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979) (Claims directed to mixtures of an herbicide known as "FENAC" with a diphenyl ether herbicide in certain relative proportions were rejected as *prima facie* obvious. Applicant presented evidence alleging unexpected results testing three species of diphenyl ether herbicides over limited relative proportion ranges. The court held that the limited number of species exemplified did not provide an adequate basis for concluding that similar results would be obtained for the other diphenyl ether herbicides within the scope of the generic claims. Claims 6-8 recited a FENAC:diphenyl ether ratio of 1:1 to 4:1 for the three specific ethers tested. For two of the claimed ethers, unexpected results were demonstrated over a ratio of 16:1 to 2:1, and the effectiveness increased as the ratio approached the untested region of the claimed range. The court held these tests were commensurate in scope with the claims and supported the nonobviousness thereof. However, for a third ether, data was only provided over the range of 1:1 to 2:1 where the effectiveness decreased to the "expected level" as it approached the untested region. This evidence was not sufficient to overcome the obviousness rejection.); *In re Lindner*, 457 F.2d 506, 509, 173 USPQ 356, 359 (CCPA 1972) (Evidence of nonobviousness consisted of comparing a single composition within the broad scope of the claims with the prior art. The court did not find the evidence sufficient to rebut the *prima facie* case of obviousness because there was "no adequate basis for reasonably concluding that the great number and variety of compositions included in the claims would behave in the same manner as the tested composition.").

II. DEMONSTRATING CRITICALITY OF A CLAIMED RANGE

To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960).

716.02(e) Comparison With Closest Prior Art [R-08.2012]

An affidavit or declaration under **37 CFR 1.132** must compare the claimed subject matter with the closest prior art to be effective to rebut a *prima facie* case of obviousness. *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). "A comparison of the *claimed* invention with the disclosure of each cited reference to determine the number of claim limitations

719.05-Field of Search
720-Public Use Proceedings
721-723-[Reserved]
724-Trade Secret, Proprietary, and Protective Order Materials
724.01-Completeness of the Patent File Wrapper
724.02-Method of Submitting Trade Secret, Proprietary, and/or Protective Order Materials
724.03-Types of Trade Secret, Proprietary, and/or Protective Order Materials Submitted Under MPEP § 724.02
724.04-Office Treatment and Handling of Materials Submitted Under MPEP § 724.02
724.04(a)-Materials Submitted in an Application Covered by 35 U.S.C. 122
724.04(b)-Materials Submitted in Reissue Applications Open to the Public Under 37 CFR 1.11(b)
724.04(c)-Materials Submitted in Reexamination File Open to the Public Under 37 CFR 1.11(d)
724.05-Petition To Expunge Information or Copy of Papers in Application File
724.06-Handling of Petitions To Expunge Information or Copy of Papers in Application File

in common with each reference, bearing in mind the relative importance of particular limitations, will usually yield the closest single prior art reference.” *In re Merchant*, 575 F.2d 865, 868, 197 USPQ 785, 787 (CCPA 1978) (emphasis in original). Where the comparison is not identical with the reference disclosure, deviations therefrom should be explained, *In re Finley*, 174 F.2d 130, 81 USPQ 383 (CCPA 1949), and if not explained should be noted and evaluated, and if significant, explanation should be required. *In re Armstrong*, 280 F.2d 132, 126 USPQ 281 (CCPA 1960) (deviations from example were inconsequential).

I. THE CLAIMED INVENTION MAY BE COMPARED WITH PRIOR ART THAT IS CLOSER THAN THAT APPLIED BY THE EXAMINER

Applicants may compare the claimed invention with prior art that is more closely related to the invention than the prior art relied upon by the examiner. *In re Holladay*, 584 F.2d 384, 199 USPQ 516 (CCPA 1978); *Ex parte Humber*, 217 USPQ 265 (Bd. App. 1961) (Claims to a 13-chloro substituted compound were rejected as obvious over nonchlorinated analogs of the claimed compound. Evidence showing unexpected results for the claimed compound as compared with the 9-, 12-, and 14-chloro derivatives of the compound rebutted the *prima facie* case of obviousness because the compounds compared against were closer to the claimed invention than the prior art relied upon.).

II. COMPARISONS WHEN THERE ARE TWO EQUALLY CLOSE PRIOR ART REFERENCES

Showing unexpected results over one of two equally close prior art references will not rebut *prima facie* obviousness unless the teachings of the prior art references are sufficiently similar to each other that the testing of one showing unexpected results would provide the same information as to the other. *In re Johnson*, 747 F.2d 1456, 1461, 223 USPQ 1260, 1264 (Fed. Cir. 1984) (Claimed compounds differed from the prior art either by the presence of a trifluoromethyl group instead of a chloride radical, or by the presence of an unsaturated ester group instead of a saturated ester group. Although applicant compared the claimed invention with the prior art compound containing a chloride radical, the court found this evidence insufficient to rebut the *prima facie* case of obviousness because the evidence did not show relative effectiveness over all compounds of the closest prior art. An applicant does not have to test all the compounds taught by each reference, “[h]owever, where an applicant tests less than all cited compounds, the test must be sufficient to permit a conclusion respecting the relative effectiveness of applicant’s claimed compounds and the compounds of the closest prior art.” *Id.* (quoting *In re Payne*, 606 F.2d 303, 316, 203 USPQ 245, 256 (CCPA 1979)) (emphasis in original).).

III. THE CLAIMED INVENTION MAY BE COMPARED WITH THE CLOSEST SUBJECT MATTER THAT EXISTS IN THE PRIOR ART

Although evidence of unexpected results must compare the claimed invention with the closest prior art, applicant is not required to compare the claimed invention with subject matter that does not exist in the prior art. *In re Geiger*, 815 F.2d 686, 689, 2 USPQ2d 1276, 1279 (Fed. Cir. 1987) (Newman, J., concurring) (Evidence rebutted *prima facie* case by comparing claimed invention with the most relevant prior art. Note that the majority held the Office failed to establish a *prima facie* case of obviousness.); *In re Chapman*, 357 F.2d 418, 148 USPQ 711 (CCPA 1966) (Requiring applicant to compare claimed invention with polymer suggested by the combination of references relied upon in the rejection of the claimed invention under **35 U.S.C. 103** “would be requiring comparison of the results of the invention with the results of the invention.” 357 F.2d at 422, 148 USPQ at 714.).

716.02(f) Advantages Disclosed or Inherent [R-08.2012]

The totality of the record must be considered when determining whether a claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made. Therefore, evidence and arguments directed to advantages not disclosed in the specification cannot be disregarded. *In re Chu*, 66 F.3d 292, 298-99, 36 USPQ2d 1089, 1094-95 (Fed. Cir. 1995) (Although the purported advantage of placement of a selective catalytic reduction catalyst in the bag retainer of an apparatus for controlling emissions was not disclosed in the specification, evidence and arguments rebutting the conclusion that such placement was a matter of “design choice” should have been considered as part of the totality of the record. “We have found no cases supporting the position that a patent applicant’s evidence or arguments traversing a § 103 rejection must be contained within the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record including, in some instances most significantly, the evidence and arguments proffered during the give-and-take of *ex parte* patent prosecution.” 66 F.3d at 299, 36 USPQ2d at 1095.). See also *In re Zenitz*, 333 F.2d 924, 928, 142 USPQ 158, 161 (CCPA 1964) (evidence that claimed compound minimized side effects of hypotensive activity must be considered because this undisclosed property would inherently flow from disclosed use as tranquilizer); *Ex parte Sasajima*, 212 USPQ 103, 104 - 05 (Bd. App. 1981) (evidence relating to initially undisclosed relative toxicity of claimed pharmaceutical compound must be considered).

The specification need not disclose proportions or values as critical for applicants to present evidence showing the proportions or values to be critical. *In re Saunders*, 444 F.2d 599, 607, 170 USPQ 213, 220 (CCPA 1971).

716.02(g) [Reserved]

[Editor’s Note: Information pertaining to declaration or affidavit form has been moved to [MPEP § 716.1](#).]

716.03 Commercial Success [R-07.2022]

I. NEXUS BETWEEN CLAIMED INVENTION AND EVIDENCE OF COMMERCIAL SUCCESS REQUIRED

An applicant who is asserting commercial success to support its contention of nonobviousness bears the burden of proof of establishing a nexus between the claimed invention and evidence of commercial success.

The Federal Circuit has acknowledged that applicant bears the burden of establishing nexus, stating:

In the *ex parte* process of examining a patent application, however, the PTO lacks the means or resources to gather evidence which supports or refutes the applicant’s assertion that the sale constitute commercial success. *C.f. Ex parte Remark*, 15 USPQ2d 1498, 1503 (Bd. Pat. App. & Int. 1990)(evidentiary routine of shifting burdens in civil proceedings inappropriate in *ex parte* prosecution proceedings because examiner has no available means for adducing evidence). Consequently, the PTO must rely upon the applicant to provide hard evidence of commercial success.

In re Huang, 100 F.3d 135, 139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996). See also *In re GPAC*, 57 F.3d 1573, 1580, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995); *In re Paulsen*, 30 F.3d 1475, 1482, 31 USPQ2d 1671, 1676 (Fed. Cir. 1994) (Evidence of commercial success of articles not covered by the claims subject to the [35 U.S.C. 103](#) rejection was not probative of nonobviousness).

The term “nexus” designates a factually and legally sufficient connection between the evidence of commercial success and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir. 1988). See also [MPEP §§ 716.01\(b\)](#) and [2145](#) for more guidance on determining if the nexus requirement is met.

II. COMMERCIAL SUCCESS ABROAD IS RELEVANT

Commercial success abroad, as well as in the United States, is relevant in resolving the issue of nonobviousness. *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984).

716.03(a) Commercial Success Commensurate in Scope With Claimed Invention [R-07.2022]

I. EVIDENCE OF COMMERCIAL SUCCESS MUST BE COMMENSURATE IN SCOPE WITH THE CLAIMS

Objective evidence of nonobviousness including commercial success must be commensurate in scope with the claims. *In re Tiffin*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971) (evidence showing commercial success of thermoplastic foam “cups” used in vending machines was not commensurate in scope with claims directed to thermoplastic foam “containers” broadly). In order to be commensurate in scope with the claims, the commercial success must be due to claimed features, and not due to unclaimed features. *Joy Technologies Inc. v. Manbeck*, 751 F. Supp. 225, 229, 17 USPQ2d 1257, 1260 (D.D.C. 1990), *aff’d*, 959 F.2d 226, 228, 22 USPQ2d 1153, 1156 (Fed. Cir. 1992) (Features responsible for commercial success were recited only in allowed dependent claims, and therefore the evidence of commercial success was not commensurate in scope with the broad claims at issue.). See also [MPEP §§ 716.01\(b\)](#) and [2145](#) for more guidance on determining if the nexus requirement is met.

An affidavit or declaration attributing commercial success to a product or process “constructed according to the disclosure and claims of [the] patent application” or other equivalent language does not establish a nexus between the claimed invention and the commercial success because there is no evidence that the product or process which has been sold corresponds to the claimed invention, or that whatever commercial success may have occurred is attributable to the product or process defined by the claims. *Ex parte Standish*, 10 USPQ2d 1454, 1458 (Bd. Pat. App. & Inter. 1988).

II. REQUIREMENTS WHEN CLAIMED INVENTION IS NOT COEXTENSIVE WITH COMMERCIAL PRODUCT OR PROCESS

If a particular range is claimed, applicant does not need to show commercial success at every point in the range. “Where, as here, the claims are directed to a combination of ranges and procedures not shown by the prior art, and where substantial commercial success is achieved at an apparently typical point within those ranges, and the affidavits definitely indicate that operation throughout the claimed ranges approximates that at the particular points involved in the commercial operation, we think the evidence as to commercial success is persuasive.” *In re Hollingsworth*, 253 F.2d 238, 240, 117 USPQ 182, 184 (CCPA 1958). See also *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir. 1988) (where the commercially successful product or process is not coextensive with the claimed invention, applicant must show a legally sufficient relationship between the claimed feature and the commercial product or process).

716.03(b) Commercial Success Derived From Claimed Invention [R-07.2022]

I. COMMERCIAL SUCCESS MUST BE DERIVED FROM THE CLAIMED INVENTION

In considering evidence of commercial success, care should be taken to determine that the commercial success alleged is directly derived from the invention claimed, in a marketplace where the consumer is free to choose on the basis of objective principles, and that such success is not the result of heavy promotion or advertising, shift in advertising, consumption by purchasers normally tied to applicant or assignee, or other business events extraneous to the merits of the claimed invention, etc. *In re Mageli*, 470 F.2d 1380, 176 USPQ 305 (CCPA 1973) (conclusory statements or opinions that increased sales were due to the merits of the invention are entitled to little weight); *In re Noznick*, 478 F.2d 1260, 178 USPQ 43 (CCPA 1973).

In *ex parte* proceedings before the Patent and Trademark Office, an applicant must show that the claimed features were responsible for the commercial success of an article if the evidence of nonobviousness is to be accorded substantial weight. See *In re Huang*, 100 F.3d 135, 140, 40 USPQ2d 1685, 1690 (Fed. Cir. 1996) (Inventor’s opinion as to the purchaser’s reason for buying the product is insufficient to demonstrate a nexus between the sales and the claimed invention.). Merely showing that there was commercial success of an article which embodied the invention is not sufficient. *Ex parte Remark*, 15 USPQ2d 1498, 1502-02 (Bd. Pat. App. & Inter. 1990). Compare *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir. 1988) (In civil litigation, a patentee does not have to prove that the commercial success is not due to other factors. “A requirement for proof of the negative of all imaginable contributing factors would be unfairly burdensome, and contrary to the ordinary rules of evidence.”).

See also *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 227 USPQ 766 (Fed. Cir. 1985) (commercial success may have been attributable to extensive advertising and position as a market leader before the introduction of the patented product); *In re Fielder*, 471 F.2d 690, 176 USPQ 300 (CCPA 1973) (success of invention could be due to recent changes in related technology or consumer demand; here success of claimed voting ballot could be due to the contemporary drive toward greater use of automated data processing techniques); *EWP Corp. v. Reliance Universal, Inc.*, 755 F.2d 898, 225 USPQ 20 (Fed. Cir. 1985) (evidence of licensing is a secondary consideration which must be carefully appraised as to its evidentiary value because licensing programs may succeed for reasons unrelated to the unobviousness of the product or process, e.g., license is mutually beneficial or less expensive than defending infringement suits); *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed. Cir. 1986) (Evidence of commercial success supported a conclusion of nonobviousness of claims to an immunometric “sandwich” assay with monoclonal antibodies. Patentee’s assays became a market leader with 25% of the market within a few years. Evidence of advertising did not show absence of

a nexus between commercial success and the merits of the claimed invention because spending 25-35% of sales on marketing was not inordinate (mature companies spent 17-32% of sales in this market), and advertising served primarily to make industry aware of the product because this is not kind of merchandise that can be sold by advertising hyperbole.).

II. COMMERCIAL SUCCESS MUST FLOW FROM THE FUNCTIONS AND ADVANTAGES DISCLOSED OR INHERENT IN THE SPECIFICATION DESCRIPTION

To be pertinent to the issue of nonobviousness, the commercial success of devices falling within the claims of the patent must flow from the functions and advantages disclosed or inherent in the description in the specification. Furthermore, the success of an embodiment within the claims may not be attributable to improvements or modifications made by others. *In re Vamco Machine & Tool, Inc.*, 752 F.2d 1564, 224 USPQ 617 (Fed. Cir. 1985). See also *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 833, 117 USPQ2d 1393, 1399 (Fed. Cir. 2015), *cert. denied*, 137 S. Ct. 297 (2016) (commercial success resulted from a "unique combination" of ingredients, a synergistic interaction of components, or a specific combination of specific forms of B-vitamins and other active ingredients, rather than from the claimed method of "using L-5-MTHF and 'at least one B-vitamin'").

III. IN DESIGN CASES, ESTABLISHMENT OF NEXUS IS ESPECIALLY DIFFICULT

Establishing a nexus between commercial success and the claimed invention is especially difficult in design cases. Evidence of commercial success must be clearly attributable to the design to be of probative value, and not to brand name recognition, improved performance, or some other factor. *Litton Systems, Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 221 USPQ 97 (Fed. Cir. 1984) (showing of commercial success was not accompanied by evidence attributing commercial success of Litton microwave oven to the design thereof).

IV. SALES FIGURES MUST BE ADEQUATELY DEFINED

Gross sales figures do not show commercial success absent evidence as to market share, *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 226 USPQ 881 (Fed. Cir. 1985) (overruled on other grounds by *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 50 USPQ2d 1672 (Fed. Cir. 1999)), or as to the time period during which the product was sold, or as to what sales would normally be expected in the market, *Ex parte Standish*, 10 USPQ2d 1454 (Bd. Pat. App. & Inter. 1988).

716.04 Long-Felt Need and Failure of Others [R-07.2022]

I. THE CLAIMED INVENTION MUST SATISFY A LONG-FELT NEED WHICH WAS RECOGNIZED, PERSISTENT, AND NOT SOLVED BY OTHERS

Establishing long-felt need requires objective evidence that an art recognized problem existed in the art for a long period of time without solution. The relevance of long-felt need and the failure of others to the issue of obviousness depends on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. *In re Gershon*, 372 F.2d 535, 539, 152 USPQ 602, 605 (CCPA 1967) ("Since the alleged problem in this case was first recognized by appellants, and others apparently have not yet become aware of its existence, it goes without saying that there could not possibly be any evidence of either a long felt need in the . . . art for a solution to a problem of dubious existence or failure of others skilled in the art who unsuccessfully attempted to solve a problem of which they were not aware."); *Orthopedic Equipment Co., Inc. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 217 USPQ 1281 (Fed. Cir. 1983) (Although the claimed invention achieved the desirable result of reducing inventories, there was no evidence of any prior unsuccessful attempts to do so.).

Second, the long-felt need must not have been satisfied by another before the invention by the inventor. *Newell Companies v. Kenney Mfg. Co.*, 864 F.2d 757, 768, 9 USPQ2d 1417, 1426 (Fed. Cir. 1988) (Although at one time there was a long-felt need for a "do-it-yourself" window shade material which was adjustable without the use of tools, a prior art product fulfilled the need by using a scored plastic material which could be torn. "[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved".)

Third, the invention must in fact satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491, 168 USPQ 466 (CCPA 1971).

See *Ex parte Thompson*, Appeal 2011-011620 (March 21, 2014) (informative) for the board's analysis of the above-mentioned three factors in reversing an obviousness rejection due to evidence of long felt need.

II. LONG-FELT NEED IS MEASURED FROM THE DATE A PROBLEM IS IDENTIFIED AND EFFORTS ARE MADE TO SOLVE IT

Long-felt need is analyzed as of the date the problem is identified and articulated, and there is evidence of efforts to solve that problem, not as of the date of the most pertinent prior art references. *Texas Instruments Inc. v. Int'l Trade Comm'n*, 988 F.2d 1165, 1179, 26 USPQ2d 1018, 1029 (Fed. Cir. 1993).

III. OTHER FACTORS CONTRIBUTING TO THE PRESENCE OF A LONG-FELT NEED MUST BE CONSIDERED

The failure to solve a long-felt need may be due to factors such as lack of interest or lack of appreciation of an invention's potential or marketability rather than want of technical know-how. *Scully Signal Co. v. Electronics Corp. of America*, 570 F.2d 355, 196 USPQ 657 (1st. Cir. 1977).

See also *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 698, 218 USPQ 865, 869 (Fed. Cir. 1983) (presence of legislative regulations for controlling sulfur dioxide emissions did not militate against existence of long-felt need to reduce the sulfur content in the air); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971) (fact that affidavit supporting contention of fulfillment of a long-felt need was sworn by a licensee adds to the weight to be accorded the affidavit, as long as there is a *bona fide* licensing agreement entered into at arm's length).

716.05 Skepticism of Experts [R-08.2012]

"Expressions of disbelief by experts constitute strong evidence of nonobviousness." *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 698, 218 USPQ 865, 869 (Fed. Cir. 1983) (citing *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 483-484 (1966)) (The patented process converted all the sulfur compounds in a certain effluent gas stream to hydrogen sulfide, and thereafter treated the resulting effluent for removal of hydrogen sulfide. Before learning of the patented process, chemical experts, aware of earlier failed efforts to reduce the sulfur content of effluent gas streams, were of the opinion that reducing sulfur compounds to hydrogen sulfide would not adequately solve the problem.).

"The skepticism of an expert, expressed before these inventors proved him wrong, is entitled to fair evidentiary weight, . . . as are the five to six years of research that preceded the claimed invention." *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988); *Burlington Industries Inc. v. Quigg*, 822 F.2d 1581, 3 USPQ2d 1436 (Fed. Cir. 1987) (testimony that the invention met with initial incredulity and skepticism of experts was sufficient to rebut the *prima facie* case of obviousness based on the prior art).

716.06 Copying [R-07.2022]

Another form of secondary evidence which may be presented by applicants during prosecution of an application, but which is more often presented during litigation, is evidence that competitors in the marketplace are copying the invention instead of using the prior art. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325, 73 USPQ2d 1225, 1230 (Fed. Cir. 2004) ("Our cases do establish that copying by a competitor may be a relevant consideration in the secondary factor analysis"). As indicated by the Federal Circuit in *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246, 95 USPQ2d 1525, 1537 (Fed. Cir. 2010), copying "... requires evidence of efforts to replicate a specific product, which may be demonstrated through internal company documents, direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a replica, or access to the patented product combined with substantial similarity to the patented product." .

Evidence that shows access to a competitor's non-public information and use of that information to develop a product may be persuasive evidence of copying. *Liqwd, Inc. v. L'Oreal USA, Inc.*, 941 F.3d 1133, 1139 (Fed. Cir. 2019) (Liqwd presented evidence, such as emails and declarations, that showed L'Oreal had access to the then-confidential disclosure of the patent application and L'Oreal's subsequent loss of interest in purchasing Liqwd's technology). Evidence of copying was persuasive of nonobviousness when an alleged infringer tried for a substantial length of time to design a product or process similar to the claimed invention, but failed and then copied the claimed invention instead. *Dow Chem. Co. v. American Cyanamid Co.*, 816 F.2d 617, 2 USPQ2d 1350 (Fed. Cir. 1987) and *Panduit Corp. v. Dennison Manufacturing Co.*, 774 F.2d 1082, 1098-99, 227 USPQ 337, 348, 349 (Fed. Cir. 1985), vacated on other grounds, 475 U.S. 809, 229 USPQ 478 (1986), on remand, 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir. 1987) (evidence of copying found persuasive of nonobviousness where admitted infringer failed to satisfactorily produce a solution after 10 years of effort and expense).

However, more than the mere fact of copying is necessary to make that action significant because copying may be attributable to other factors such as a lack of concern for patent property or contempt for the patentee's ability to enforce the patent. *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 226 USPQ 881 (Fed. Cir. 1985) (overruled on other grounds by *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 50 USPQ2d 1672 (Fed. Cir. 1999)). Alleged copying is not persuasive of nonobviousness when the copy is not identical to the claimed product, and the other manufacturer had not expended great effort to develop its own solution. *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 227 USPQ 766 (Fed. Cir. 1985). See also *Vandenberg v. Dairy Equipment Co.*, 740 F.2d 1560, 1568, 224 USPQ 195, 199 (Fed. Cir. 1984) (evidence of copying not found persuasive of nonobviousness because the basic concepts of a plastic support device using a ball and socket joint were developed prior to learning of their competitor's device).

716.07 Inoperability of References [R-07.2022]

Since every patent is presumed valid ([35 U.S.C. 282](#)), and since that presumption includes the presumption of operability (*Metropolitan Eng. Co. v. Coe*, 78 F.2d 199, 25 USPQ 216 (D.C. Cir. 1935)), examiners should not express any opinion on the operability of a patent. Affidavits or declarations attacking the operability of a patent cited as a reference must rebut the presumption of operability by a preponderance of the evidence. *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).

Further, since in a patent it is presumed that a process if used by one skilled in the art will produce the product or result described therein, such presumption is not overcome by a mere showing that it is possible to operate within the disclosure without obtaining the alleged product. *In re Weber*, 405 F.2d 1403, 160 USPQ 549 (CCPA 1969). It is to be presumed also that skilled workers would as a matter of course, if they do not immediately obtain desired results, make certain experiments and adaptations, within the skill of the competent worker. The failures of experimenters who have no interest in succeeding should not be accorded great weight. *In re Michalek*, 162 F.2d 229, 74 USPQ 107 (CCPA 1947); *In re Reid*, 179 F.2d 998, 84 USPQ 478 (CCPA 1950).

Where the affidavit or declaration presented asserts inoperability in features of the reference which are not relied upon, the reference is still effective as to other features which are operative. *In re Shepherd*, 172 F.2d 560, 80 USPQ 495 (CCPA 1949).

Where the affidavit or declaration presented asserts that the reference relied upon is inoperative, the claims represented by applicant must distinguish from the alleged inoperative reference disclosure. *In re Crosby*, 157 F.2d 198, 71 USPQ 73 (CCPA 1946). See also *In re Epstein*, 32 F.3d 1559, 31 USPQ2d 1817 (Fed. Cir. 1994) (lack of diagrams, flow charts, and other details in the prior art references did not render them nonenabling in view of the fact that applicant's own specification failed to provide such detailed information, and that one skilled in the art would have known how to implement the features of the references).

If a patent teaches or suggests the claimed invention, an affidavit or declaration by patentee that they did not intend the disclosed invention to be used as claimed by applicant is immaterial. *In re Pio*, 217 F.2d 956, 104 USPQ 177 (CCPA 1954). Compare *In re Yale*, 434 F.2d 666, 168 USPQ 46 (CCPA 1970) (Correspondence from a co-author of a literature article confirming that the article misidentified a compound through a typographical error that would have been obvious to one of ordinary skill in the art was persuasive evidence that the erroneously typed compound was not put in the possession of the public.).

716.08 Utility and Operability of Applicant's Disclosure [R-08.2012]

See [MPEP § 2107.02](#), for guidance on when it is proper to require evidence of utility or operativeness, and how to evaluate any evidence which is submitted to overcome a rejection under [35 U.S.C. 101](#) for lack of utility. See [MPEP § 2107](#) - [§ 2107.03](#) generally for utility examination guidelines and an overview of legal precedent relevant to the utility

requirement of [35 U.S.C. 101](#).

716.09 Sufficiency of Disclosure [R-11.2013]

See [MPEP § 2164 - § 2164.08\(c\)](#) for guidance in determining whether the specification provides an enabling disclosure in compliance with [35 U.S.C. 112\(a\)](#) or pre-AIA 35 U.S.C. 112, first paragraph.

Once the examiner has established a *prima facie* case of lack of enablement, the burden falls on the applicant to present persuasive arguments, supported by suitable proofs where necessary, that one skilled in the art would have been able to make and use the claimed invention using the disclosure as a guide. *In re Brandstadter*, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973). Evidence to supplement a specification which on its face appears deficient under [35 U.S.C. 112](#) must establish that the information which must be read into the specification to make it complete would have been known to those of ordinary skill in the art. *In re Howarth*, 654 F.2d 103, 210 USPQ 689 (CCPA 1981) (copies of patent specifications which had been opened for inspection in Rhodesia, Panama, and Luxembourg prior to the U.S. filing date of the applicant were not sufficient to overcome a rejection for lack of enablement under [35 U.S.C. 112\(a\)](#) or [pre-AIA 35 U.S.C. 112](#), first paragraph).

Affidavits or declarations presented to show that the disclosure of an application is sufficient to one skilled in the art are not acceptable to establish facts which the specification itself should recite. *In re Buchner*, 929 F.2d 660, 18 USPQ2d 1331 (Fed. Cir. 1991) (Expert described how he would construct elements necessary to the claimed invention whose construction was not described in the application or the prior art; this was not sufficient to demonstrate that such construction was well-known to those of ordinary skill in the art.); *In re Smyth*, 189 F.2d 982, 90 USPQ 106 (CCPA 1951).

Affidavits or declarations purporting to explain the disclosure or to interpret the disclosure of a pending application are usually not considered. *In re Oppenauer*, 143 F.2d 974, 62 USPQ 297 (CCPA 1944). But see *Glaser v. Strickland*, 220 USPQ 446 (Bd. Pat. Int. 1983) which reexamines the rationale on which *In re Oppenauer* was based in light of the Federal Rules of Evidence. The Board stated as a general proposition "Opinion testimony which merely purports to state that a claim or count, is 'disclosed' in an application involved in an interference . . . should not be given any weight. Opinion testimony which purports to state that a particular feature or limitation of a claim or count is disclosed in an application involved in an interference and which explains the underlying factual basis for the opinion may be helpful and can be admitted. The weight to which the latter testimony may be entitled must be evaluated strictly on a case-by-case basis."

716.10 Attribution Affidavit or Declaration to Overcome Rejection Under Pre-AIA 35 U.S.C. 102 or 103 [R-10.2019]

[Editor Note: This MPEP section is not applicable to applications subject to the first inventor to file provisions of the AIA unless being relied upon to overcome a rejection under [pre-AIA 35 U.S.C. 102\(g\)](#). See [35 U.S.C. 100 \(note\)](#) and [MPEP § 2159](#). For a discussion of [37 CFR 1.130](#), affidavits or declarations of attribution or prior public disclosure in applications subject to the first inventor to file provisions of the AIA, see [MPEP § 717](#). "Derivation" or "derived" as used in the discussion below is in the context of pre-AIA law. "Derivation proceedings" as created in the AIA are discussed in [MPEP § 2310 et seq.](#)]

Under certain circumstances an affidavit or declaration may be submitted which attempts to attribute an activity, a reference or part of a reference to the inventor or at least one joint inventor to overcome a rejection based on [pre-AIA 35 U.S.C. 102](#) prior art. If successful, the activity or the reference is no longer applicable. When subject matter, disclosed in a patent or patent application (reference) naming an inventive entity including inventor S and another joint inventor is claimed in a later application naming inventor S without the joint inventor, the joint patent or joint patent application publication is a valid reference available as prior art under [pre-AIA 35 U.S.C. 102\(a\), \(e\), or \(f\)](#) until overcome by an affidavit or declaration under [37 CFR 1.131\(a\)](#) showing prior invention (see [MPEP § 715](#)) or by an affidavit or declaration under [37 CFR 1.132](#). An unequivocal declaration under [37 CFR 1.132](#) by S that he/she conceived or invented the subject matter that was disclosed but not claimed in the patent or patent application publication and relied on in the rejection has been sufficient to overcome the rejection. *In re DeBaun*, 687 F.2d 459, 214 USPQ 933 (CCPA 1982)(declaration corroborated by attached drawing). Depending on the situation, documentation created contemporaneously with the conception/invention and/or declarations/affidavits by the other inventor(s) named in the reference may be used to corroborate inventorship. See *EmeraChem Holdings, LLC v. Volkswagen Grp. of Am., Inc.*, 859 F.3d 1341, 123 USPQ2d 1146 (Fed. Cir. 2017). Where the reference is a U.S. patent or patent application publication which includes a claim reciting the subject matter relied upon in a rejection and that subject matter anticipates or would render obvious the subject matter of a claim in the application under examination, a declaration under [37 CFR 1.132](#) must also explain the presence of the additional inventor in the reference (e.g., the disclosure in claim 1 of the reference is relied upon to reject the claims; the affidavit or declaration explains that S is the sole inventor of claim 1, and the additional inventor and S are joint inventors of claim 2 of the reference). Testimony or disclaimer by the other inventor named in the reference is usually not required but, if submitted, should be considered by the examiner.

Note that an affidavit or declaration under [37 CFR 1.131\(a\)](#) cannot be used to overcome a rejection based on a U.S. patent or U.S. patent application publication naming a different inventive entity which claims interfering subject matter as defined in [37 CFR 41.203\(a\)](#). See [MPEP § 715.05](#).

For applications subject to current [35 U.S.C. 102](#), see [MPEP §§ 717, 2153](#) and [2154](#).

Where there is a published article identifying the authorship ([MPEP § 715.01\(c\)](#)) or a patent or an application publication identifying the inventorship ([MPEP § 715.01\(a\)](#)) that discloses subject matter being claimed in an application undergoing examination, the designation of authorship or inventorship does not raise a presumption of inventorship with respect to the subject matter disclosed in the article or with respect to the subject matter disclosed but not claimed in the patent or published application so as to justify a rejection under [pre-AIA 35 U.S.C. 102\(f\)](#).

However, it is incumbent upon the applicant in the application, in response to an inquiry regarding the appropriate inventorship under [pre-AIA 35 U.S.C. 102\(f\)](#) or to rebut a rejection under [pre-AIA 35 U.S.C. 102\(a\) or \(e\)](#), to provide a satisfactory showing by way of affidavit or declaration under [37 CFR 1.132](#) that the inventorship of the application is correct in that the reference discloses subject matter derived from the inventor or at least one joint inventor of the

application undergoing examination rather than invented by the author, patentee, or applicant of the published application notwithstanding the authorship of the article or the inventorship of the patent or published application. *In re Katz*, 687 F.2d 450, 455, 215 USPQ 14, 18 (CCPA 1982) (inquiry is appropriate to clarify any ambiguity created by an article regarding inventorship and it is then incumbent upon the applicant to provide “a satisfactory showing that would lead to a reasonable conclusion that [inventor or at least one joint inventor] is the ... inventor” of the subject matter disclosed in the article and claimed in the application).

An uncontradicted “unequivocal statement” from an inventor or joint inventor regarding the subject matter disclosed in an article, patent, or published application has been accepted as establishing inventorship. *In re DeBaun*, 687 F.2d 459, 463, 214 USPQ 933, 936 (CCPA 1982)(declaration corroborated by attached drawing). Depending on the situation, documentation created contemporaneously with the conception/invention and/or declarations/affidavits by the other inventor(s) named in the reference may be used to corroborate inventorship. See *EmeraChem Holdings, LLC v. Volkswagen Grp. of Am., Inc.*, 859 F.3d 1341, 123 USPQ2d 1146 (Fed. Cir. 2017). When additional documentary evidence contradicts statements made by the inventor or at least one joint inventor with respect to inventorship, it may be appropriate to maintain the rejection(s). *Ex parte Kroger*, 219 USPQ 370 (Bd. App. 1982) (a rejection under [pre-AIA 35 U.S.C. 102\(f\)](#) was affirmed notwithstanding declarations by the alleged actual inventors as to their inventorship in view of a nonapplicant author submitting a letter declaring the author’s inventorship); *In re Carreira*, 532 F.2d 1356, 189 USPQ 461 (CCPA 1976) (disclaiming declarations from patentees were directed at the generic invention and not at the claimed species, hence no need to consider derivation of the subject matter).

A successful [37 CFR 1.132](#) affidavit or declaration establishing derivation by the author, patentee, or applicant of the published application of a first reference does not enable an applicant to step into the shoes of that author, patentee, or applicant of the published application in regard to its date of publication so as to defeat a later second reference. *In re Costello*, 717 F.2d 1346, 1350, 219 USPQ 389, 392 (Fed. Cir. 1983).

Affidavits or declarations of attribution for applications subject to [pre-AIA 35 U.S.C. 102](#) are affidavits or declarations under [37 CFR 1.132](#) because these are not otherwise provided for in the rules of practice. The Office will treat affidavits or declarations of attribution for applications subject to the current [35 U.S.C. 102](#) as affidavits or declarations under [37 CFR 1.130](#), and affidavits or declarations of attribution for applications subject to [pre-AIA 35 U.S.C. 102](#) as affidavits or declarations under [37 CFR 1.132](#), regardless of whether the affidavit or declaration is designated as an affidavit or declaration under [37 CFR 1.130](#), [1.131](#), or [37 CFR 1.132](#).

EXAMPLES

The following examples demonstrate the application of an attribution affidavit or declaration.

Example 1

During the search the examiner finds a reference fully describing the claimed invention. The authorship or inventive entity of the reference is the same as the inventive entity of the application and the reference was published or patented less than one year prior to the filing date of the application. The reference cannot be used against applicant because it does not satisfy the 1-year time requirement of [pre-AIA 35 U.S.C. 102\(b\)](#).

Example 2

Same facts as above, but the authorship or inventive entity of the reference is different from the inventive entity of the application. Because the inventive entities are different, the reference is prior art under [pre-AIA 35 U.S.C. 102\(a\) or \(e\)](#).

In the situation described in Example 2, an affidavit under [37 CFR 1.132](#) may be submitted to show that the relevant portions of the reference originated with or were obtained from the inventor or at least one joint inventor named in the application undergoing examination. Thus the affidavit attempts to convert the fact situation from that described in Example 2 to the situation described in Example 1.

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