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Inherency in Patent Law

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INTRODUCTION

A claim in a patent application lacks novelty if each element of the claim is disclosed in a single prior art reference.¹ In such a situation, the claim is said to be anticipated.

A prior art reference may anticipate a claim element by disclosing the element either expressly or inherently.² There are rarely any issues raised if all the elements are disclosed expressly in the reference.

Inherency relates to the anticipation of a claim by a prior art reference that does not expressly disclose at least one element of the claim. Such a reference may still be anticipatory if the missing element is inherent in the disclosure of the reference.³

Several recent Federal Circuit cases have clarified the law with respect to inherency. The present article will review some of these cases.

Two older cases that are generally not recognized, incorrectly in the opinion of the authors, as having been decided on the basis of inherency will also be reviewed. It will be proposed below that these cases were decided on the basis of inherency, and that they shed considerable light on the law of inherent anticipation.

Consideration of these and other relevant cases reveals three identifiable aspects of the doctrine of inherency. The first aspect is the

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¹ 35 USC 102.

² See, for example, *Verdegaal Brothers v. Union Oil Co.*, 814 F.2d 628; 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

³ *Id.*

requirement for certainty. The second aspect is the chronological order used for determining whether inherency exists. The third aspect is the legal standard for determining whether inherency exists.

THE REQUIREMENT FOR CERTAINTY

It is well settled that one of the criteria for determining whether a claimed element is inherently disclosed in a prior art reference is certainty. As was stated by the Court of Customs and Patent Appeals (CCPA) more than sixty years ago:

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.⁴

A comparison between two cases illustrates the requirement for certainty. In *In re Zierden*,⁵ an applicant discovered that deposits of alluvium in industrial waters could be removed and prevented by adding to such waters insoluble potassium metaphosphate and a solubilizing agent. Alluvium was described in the specification as "...silt, mud, and/or organic wastes and other accumulation which deposit on heat exchange surfaces and create problems of corrosion, loss of heat transfer efficiency, and the like..."⁶

Zierden's application was rejected by the patent examiner. The rejection was upheld by the Board of Appeals, now the Board of Patent Appeals and Interferences ("the Board"). Zierden appealed to the court responsible at the time for hearing patent appeals, namely the CCPA.⁷

The appealed claims were directed to both methods and compositions.⁸ Claims 1 and 6 are representative:

⁴ *Hansgig v. Kimmer*, 102 F.2d 212; 40 USPQ 665 (CCPA 1939). See also *In re Oelrich et al.*, 666 F.2d 578; 212 USPQ 323 (CCPA 1981).

⁵ 411 F.2d 1325; 162 USPQ 102 (CCPA 1969).

⁶ *Id.* at 102.

⁷ *Id.*

⁸ *Id.* at 103.

1. The method of removing and preventing alluvium deposits in water systems which comprises adding to such systems insoluble potassium metaphosphate and a solubilizing agent therefor.
6. A composition for removing and preventing alluvium deposits in water systems consisting essentially of insoluble potassium metaphosphate, a solubilizing agent therefor and a compatible dispersing agent.

The patent examiner rejected both types of claims under 35 U.S.C. §103 as being obvious over French Patent No. 901765 in view of two secondary references. The French patent disclosed the use of insoluble potassium metaphosphate and a solubilizing agent to treat industrial heating and cooling water systems. The purpose of the treatment was to prevent calcium carbonate deposits known as scale. The secondary references were cited “primarily only to show that all industrial cooling waters contain deposit-forming sand, silt, mud, etc., which is considered to be the ‘alluvium’ recited.”⁹

On appeal, the CCPA upheld the rejection of composition claim 6. The composition disclosed by the French patent and the composition recited in rejected claim 6 were found to be identical. The only difference was the substance intended to be removed from industrial waters with the composition.¹⁰

The court held that: “A mere statement of a new use for an otherwise old or obvious composition cannot render a claim to the composition patentable.”¹¹ Citing *In re Lemin*,¹² the court further reasoned that: “The directions on the label will not change the composition.”¹³ Therefore, the rejections of claims 6 was upheld.

A different result was achieved with regard to method claim 1. As was noted by the CCPA, there is statutory authority to grant a patent for a new use of a known process or composition of matter, as long as the claim to the new use satisfies the other provisions of the patent act.¹⁴

⁹ *Id.*

¹⁰ *Id.* at 104.

¹¹ *Id.*

¹² 326 F.2d 437; 140 USPQ 273 (CCPA 1964).

¹³ *In re Zierden*, above, at 104.

¹⁴ *Id.*

The solicitor argued that:

...the secondary references make it clear that 'industrial waters' mentioned in the French patent as the subject of treatment to prevent scale, do contain alluvium and, this being so, the alluvium would *inherently* be removed.¹⁵ (Emphasis added.)

The court rejected the solicitor's inherency argument. According to the court, the French patent disclosed the treatment of industrial waters only to prevent the deposition of scale.¹⁶ Method claim 1 of the Zierden patent recited the treatment of industrial waters to prevent and remove alluvium deposits. Judge Rich, writing for the CCPA, observed that there is no teaching of removing alluvium from industrial waters in the French patent.¹⁷

Nor, in the court's opinion, was this deficiency of the French patent rectified by the secondary references. As mentioned above, the secondary references disclose that all industrial waters contain alluvium.

According to Judge Rich, all industrial waters do not necessarily contain alluvium at the time of carrying out the process described in the French patent. Thus, Judge Rich noted that the industrial waters treated in accordance with the French patent might have been filtered to remove alluvium before the addition of potassium metaphosphate to remove scale. Filtration to remove alluvium had, in fact, been taught in one of the secondary references.¹⁸ Therefore, the rejection of method claim 1 was reversed.¹⁹

The solicitor, arguing for the patent office, had attempted to rely on *In re Tomlinson*²⁰ in support of his argument that method claim 1 of *Zierden* was inherently disclosed in the French patent.²¹ The *Tomlinson* decision was also written by Judge Rich, and is factually closely related to *In re Zierden*. It is instructive to examine how Judge Rich distinguished the facts of the *Tomlinson* case from those in *Zierden*.

¹⁵ *Id.* at 105.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* at 106.

²⁰ 363 F.2d 928; 150 USPQ 623 (CCPA 1966).

²¹ *In re Zierden*, above, at 106.

The claims at issue in *Tomlinson* stated the following:²²

1. A light-stable composition comprising solid, isotactic, substantially crystalline polypropylene and a stabilizing quantity of (certain nickel dithiocarbamates).

18. A process of inhibiting degradation of polypropylene caused by exposure to light which comprises admixing solid, isotactic, substantially crystalline polypropylene and a stabilizing quantity of (certain nickel dithiocarbamates).

A prior art patent of Tholstrup et al. disclosed the stabilization of polypropylene against *heat* degradation by incorporating zinc dithiocarbamates.²³ The corresponding nickel dithiocarbamates were said to suffer serious disadvantage due to discoloration "...which militates against their use in producing the colorless products which are often much desired."²⁴

According to Judge Rich, polypropylene containing nickel dithiocarbamates are specifically disclosed in the Tholstrup patent. Therefore, compositions comprising polypropylene and nickel dithiocarbamates, as recited in claim 1, were said to be expressly anticipated by the Tholstrup patent.²⁵

The applicants in *Tomlinson* argued that the process of using nickel dithiocarbamates for stabilizing polypropylene against *ultraviolet light*, as recited in claim 18, was new.²⁶ As mentioned above, the Tholstrup patent disclosed the addition of nickel dithiocarbamates to polypropylene as being useful, although disadvantageous, for stabilizing the polypropylene against *heat* degradation.

Nevertheless, the CCPA affirmed the rejection of process claim 18. According to Judge Rich, the only step in the claimed process, namely admixing polypropylene and a nickel dithiocarbamate, was disclosed in the Tholstrup patent.²⁷

Unlike its decision in *Zierden*, the CCPA did not consider the intended use in *Tomlinson* to constitute a patentable distinction of the claimed process over that of the prior art. Judge Rich explained as follows:

²² *In re Tomlinson*, above, at 625.

²³ *Id.* at 624.

²⁴ *Id.* at 628.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

That (intended use) language (“inhibiting degradation of polypropylene caused by exposure to light”), in effect, states the *result* of admixing the two materials. While the references do not show a specific recognition of that result, its discovery by appellants is tantamount only to finding a property in the *old composition*, not in the nickel compound for which, it is argued, a new use has been found (original emphasis).²⁸

Thus, Judge Rich in *Tomlinson* rejected the argument that light stabilization constituted a new use of the known process of admixing a nickel dithiocarbamate and polypropylene. Rather, light stabilization was said merely to constitute a property of the old mixture.²⁹

Judge Rich in *Zierden*, by contrast, considered the removal of alluvium by potassium metaphosphate to constitute a new use of a known process. See above.

The distinction between a new use of a known process, as in *Zierden*, and a result of a known process, as in *Tomlinson*, is critical. The “new use” is patentable. The “result” is inherent and, therefore, unpatentable.

Why did Judge Rich find a new use in *Zierden* and merely an inherent result in *Tomlinson*? The authors believe the answer lies in the following distinction:

In *Zierden*, Judge Rich found it was known how to remove alluvium from industrial waters before carrying out the process described in the prior art cited against method claim 1.³⁰ Consequently, the prior art process did not necessarily always result in the claimed process.

In *Tomlinson*, however, Judge Rich explained that:

...it is of particular importance, we think, that no reference of record expressly discloses stabilizing polypropylene against the degradation effects caused by light.³¹

Accordingly, there was no disclosure in the prior art cited against *Tomlinson* teaching how to remove the light degradability of polypropylene before adding nickel dithiocarbamate to stabilize the polypropylene against heat degradation. Therefore, the property of light

²⁸ *Id.*

²⁹ *Id.*

³⁰ As mentioned above, Judge Rich noted that a secondary reference disclosed filtration of industrial waters to remove alluvium.

³¹ *Id.* at 627.

degradability was always present, and could not be removed before carrying out the claimed process, as could the alluvium from industrial waters in *Zierden*. Thus, the prior art process of *Tomlinson* always, i.e., inherently, resulted in the claimed process.

As can be seen from the above, a composition claim is anticipated if the only difference between the claim and a reference that discloses the same composition is a statement of its intended use. In such a situation, e.g., claim 6 of *Zierden* and claim 1 of *Tomlinson*, it is the composition that is being claimed. If the same composition is in the prior art, the claim is anticipated.

Similarly, a process claim is inherently anticipated when the steps of the claimed process differ from the same steps disclosed in a prior art reference by the mere statement of a newly discovered, but inherent, result of the process. Thus, the demise of claim 18 in *In re Tomlinson*.

A process claim is not inherently anticipated, however, where, as in claim 1 of *Zierden*, a newly discovered use of the claimed process does not necessarily always result from the process disclosed in a prior art reference. Not even where the steps recited in the claims and those disclosed in the reference are identical.

Judge Rich's holdings in *Zierden* and *Tomlinson* provide a consistently predictable test for analyzing the certainty requirement necessary for establishing inherency. The test is absolute. For example, the requirement for certainty is not met when an allegedly inherent element of a claim is present in the prior art, but can theoretically be eliminated, as in *Zierden*.

It is interesting to note that *In re Zierden* and *In re Tomlinson* have not generally been cited in later inherency cases. Nevertheless, the later inherency cases are consistent with the *Zierden* and *Tomlinson* decisions, as will be shown below.

The reason for the relative obscurity of *Zierden* and *Tomlinson* may be that Judge Rich did not make it clear that these decisions were based on the principles of inherency. Nevertheless, both decisions are, in fact, clearly based on the principles of inherent anticipation.

Thus, in *Tomlinson*, the finding that stabilization against light as recited in *Tomlinson*'s process claim constituted a previously unrecognized property in a known composition clearly means the property is inherent in the known composition. Moreover, Judge Rich in *Zierden* directly addressed the solicitor's argument that the prior art method of removing scale from industrial waters would inherently also remove alluvium, as recited in *Zierden*'s claims. See above.

The authors believe, therefore, that *In re Zierden* and *In re Tomlinson* should be viewed as authoritative and important decisions based on the principles of inherency.

*MEHL/Biophile International Corp. v. Milgraum*³² is a more recent case that addressed the requirement for certainty in order to establish inherency. The case involved the validity of U.S. Patent 5,059,192 to MEHL/Biophile. MEHL/Biophile sued Milgraum for patent infringement in the U.S. District Court for the District of New Jersey.

The patent relates to a method for removing hair. The method involves aligning a laser light applicator substantially vertically over a hair follicle opening. A pulse of laser energy having a wavelength readily absorbed by melanin in the hair follicle is applied. Absorption of the laser light heats the melanin. The heated melanin causes damage to the hair follicle, resulting in loss of hair.

The defendants relied on two references as allegedly anticipating the claims of the patent.³³ The first was a user manual for the RD-1200 laser ("Manual"). The Manual disclosed a method for removing tattoos by treating skin affected by tattoo ink with the laser.

The district court granted summary judgment to the defendant, Milgraum, holding the patent invalid in view of the Manual. MEHL/Biophile appealed to the Federal Circuit.³⁴

According to the Federal Circuit, "...the Manual does not discuss hair follicles, let alone aligning the laser over a hair follicle opening."³⁵ The claimed invention, on the other hand, required a laser to be aligned substantially vertically over a hair follicle opening. Therefore, the claims were found not to be expressly anticipated by the Manual.³⁶

The Federal Circuit then considered whether the Manual inherently anticipated the claims. According to the court, it was possible that the laser might be aligned substantially vertically over a hair follicle opening during the tattoo removal process taught by the Manual. The court noted, however, that inherency may not be based on possibilities, citing *Oelrich*, see above. Therefore, the court held that the Manual failed to

32 192 F.3d 1362; 52 USPQ2d 1303 (Fed. Cir. 1999).

33 *Id.* at 1305.

34 *Id.* at 1304.

35 *Id.* at 1306.

36 *Id.*

anticipate the patented claims inherently, and the district court's finding of summary judgment of patent invalidity with respect to the Manual was reversed.³⁷

The second reference relied on by Milgraum to invalidate the patent of MEHL/Biophile was an article by Polla entitled "Melanosomes Are a Primary Target of Q-Switched Ruby Laser Irradiation in Guinea Pig Skin" ("Article"). The district court had not reached a decision on the merits based on the Article, since the court relied solely on the Manual for its grant of summary judgment to Milgraum.³⁸ Reversal of the district court decision required the Federal Circuit to consider Milgraum's argument that the MEHL/Biophile patent was inherently anticipated by the Article.

The Article describes an experiment in which collimated laser beams strike a circular aperture held in contact with the skin on the backs of guinea pigs. The purpose of the experiment was to define the nature and extent of pigmented cell injury.³⁹

The Federal Circuit noted that the description of the experiment in the Article "...is replete with references to the irradiation of hair follicles and resulting follicular damage." Therefore, the court found that the experiment necessarily resulted in aligning the laser vertically over the hair follicle openings, as required by the claims.⁴⁰

MEHL/Biophile argued that the Article failed to teach treating humans, and failed to teach hair removal. The Federal Circuit was not impressed with either argument.⁴¹

The Federal Circuit found that the claim was not limited to treating humans. Therefore, the failure of the Article to mention humans was found to be irrelevant.⁴²

With regard to the argument that the Article failed to appreciate that the treatment resulted in hair removal, the court observed that it was undisputed that guinea pigs have hairy backs.⁴³ The court further reasoned that:

³⁷ *Id.*

³⁸ *Id.* at 1305.

³⁹ *Id.* at 1306.

⁴⁰ *Id.*

⁴¹ *Id.* at 1306-1307.

⁴² *Id.* at 1307.

⁴³ *Id.*

...the laser operating parameters disclosed in the article substantially coincide with those disclosed in the patent. Accordingly, to the extent the embodiment in the patent achieves hair depilation, so does the Polla method.⁴⁴

The court noted the rule that: "Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates."⁴⁵ Therefore, the Article was held to anticipate the claims inherently, and the judgment of invalidity of the patented claims was upheld.⁴⁶

CHRONOLOGICAL TEST FOR DETERMINING INHERENCY

The procedure for establishing whether a claim is expressly anticipated by a prior art reference is relatively simple. As was stated by the Federal Circuit: "Anticipation of a patent claim requires a finding that the claim at issue reads on a prior art reference."⁴⁷ Accordingly, one looks first to the claim to determine what the elements are, and then to the reference to determine whether each and every element is expressly disclosed therein.

The procedure for establishing inherent anticipation is more complex. One must still first look to the claims to determine what the elements are. If a claimed element is not expressly disclosed in the prior art, one must then determine whether the element is nevertheless inherently disclosed.

In order to determine whether a claimed element is inherently disclosed in a prior art reference, one might intuitively start with the claimed element, as one does to determine express inherency. One would then go backwards in time, and ask whether the claimed element is necessarily always found in the composition, or results in the process, disclosed in the reference. Such a procedure, referred to herein as the reverse chronology, would be analogous to the procedure used to establish express anticipation.

⁴⁴ *Id.*

⁴⁵ *Id.* at 1305, citing *In re King*, 801 F.2d 1324; 231 USPQ 136, 138 (Fed. Cir. 1986).

⁴⁶ *Id.*

⁴⁷ *Atlas Powder*, 190 F.3d 1342; 51 USPQ2d 1943, 1945 (Fed. Cir. 1999) citing *Titanium Metals v. Banner*, 778 F.2d 775; 227 USPQ 773, 778 (Fed. Cir. 1985).

In fact, the test for determining whether inherency exists is not the intuitive one. According to established case law, one looks first to the prior art disclosure, and then asks whether the prior art disclosure necessarily always results in the claimed invention. This chronological order is referred to herein as the forward chronology. The forward chronology has been articulated in various decisions of the CCPA and the Federal Circuit as follows:

[I]f a previously patented device, in its normal and [I] usual operation, will perform the function which an appellant claims in a subsequent application for process patent, then such application for process will be considered to have been anticipated by the former patented device.⁴⁸

If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught (in the reference) would result in the performance of the questioned function (claimed), it seems to be well settled that the disclosure should be regarded as sufficient.⁴⁹

Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.⁵⁰

To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference⁵¹ The Board made no attempt to show that the fastening mechanisms of (the prior art reference) that were used to attach the diaper to the wearer also necessarily disclosed the third separate fastening mechanism of claim 76.⁵²

The pertinent inquiry was whether the prior art inherently discloses the claimed (unknown) fuse-removal mechanism, not whether the fuse-removal mechanism is an inherent characteristic of the claimed (known) structure.⁵³

48 *In re Ackenbach*, 45 F.2d 437, 439; 7 USPQ 268, 270 (CCPA 1930).

49 *In re Hansgig v. Kimmer*, above at 667. *In re Oelrich*, above at 326.

50 *Atlas Powder*, above at 1946 citing *In re King*, above at 138. *MEHL/Biophile*, above at 1305, citing *In re King*, *id.* *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316; 58 USPQ2d 1545, 1552 (Fed. Cir. 2001), citing *MEHL/Biophile*, above.

51 *In re Robertson*, 169 F.3d 743; 49 USPQ2d 1949, 1950-1951; (Fed. Cir. 1999), citing *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264; 20 USPQ2d 1746; 1749 (Fed. Cir. 1991).

52 *In re Robertson*, above at 1951.

53 *EMI Group North America v. Cypress Semiconductor*, 104 F. Supp. 2d 370 (D. Del. 2000); reversed on other grounds, see below. 268 F.3d 1342; 60 USPQ2d 1423 (Fed. Cir. 2001).

A case that illustrates the significance of using the forward rather than the reverse chronology is *Eli Lilly and Co. v. Barr Laboratories, Inc.*⁵⁴ In this case, Eli Lilly accused Barr and others of infringing claim 7 of U.S. Patent 4,626,549 (“the ‘549 patent”). Barr and the other defendants asserted that claim 7 of the ‘549 patent was invalid for double patenting over claim 1 of U.S. Patent 4,590,213 (“the ‘213 patent”).

The most controversial aspect of the *Eli Lilly* decision was its double patenting holding. The present article, however, will focus on the inherency issue, upon which resolution of the double patenting issue depended.

The Federal Circuit in *Eli Lilly* explained that a claim in a later patent is invalid for double patenting over a claim in an earlier patent where there is no patentable distinction between the two claims. A later claim was said to lack patentable distinction over an earlier claim if the later claim is anticipated by, or is obvious over, the earlier claim. Therefore, the court must first construe each of the claims, and then analyze the differences.⁵⁵

If the later claim is not patentably distinct, and the earlier patent constitutes prior art, the later claim is invalid under 35 U.S.C. §102 or §103. If the earlier patent does not constitute prior art, however, and the two patents are commonly owned,⁵⁶ double patenting applies.⁵⁷ In the double patenting situation, the earlier patent is analogous to prior art for purposes relevant to this article.

According to the Federal circuit, both claim 1 of the earlier ‘213 patent and claim 7 of the later ‘549 patent encompass administering fluoxetine hydrochloride (Prozac) to humans. The only substantive difference between the two claims is their respective intended use.⁵⁸ Claim 1 of the ‘213 patent is directed to a method for treating anxiety. Claim 7 of the ‘549 patent covers a method of blocking the uptake of serotonin by brain neurons.⁵⁹

⁵⁴ 251 F3d. 955; 58 USPQ2d 1869 (Fed. Cir. 2001).

⁵⁵ *Id.* at 1878.

⁵⁶ If the two patents are not commonly owned, an interference is the appropriate remedy. 35 U.S.C. 135(a).

⁵⁷ If the scope of the later claim is different from that of the earlier claim, the double patenting may be overcome by a terminal disclaimer.

⁵⁸ *Id.* at 1879.

⁵⁹ *Id.*

As a result of their different intended uses, claim 7 of the '549 patent could not be held expressly anticipated by claim 1 of the '213 patent. Therefore, the court considered whether claim 7 of the '549 patent (blocking serotonin uptake) was inherently anticipated by claim 1 of the '213 patent (treating anxiety).

The court found that "...serotonin uptake inhibition is a natural biological activity that occurs when fluoxetine hydrochloride (i.e. Prozac) is administered to an animal, such as a human, for any purpose, including the treatment of anxiety." The court noted, for example, that Eli Lilly had previously stated in a 10-K filing to the Securities and Exchange Commission "...that serotonin uptake inhibition is the 'process by which Prozac works.'"⁶⁰

Therefore, serotonin uptake inhibition, the intended use of the method recited in claim 7 of the '549 patent, was said to be an inherent property in the administration of fluoxetine hydrochloride to treat anxiety,⁶¹ the intended use of the method recited in claim 1 of the '213 patent. Accordingly, the court held claim 7 of the '549 patent invalid for double patenting over claim 1 of the '213 patent.⁶²

Eli Lilly and all of the other inherency decisions described above are consistent with the forward chronology. As explained above, one starts with the prior art,⁶³ and goes forward in time by determining whether practice of the prior art necessarily always results in the claimed composition or process.

The chronology for determining whether a claimed element is inherently disclosed in a prior art reference can be critical. In the *Eli Lilly* decision, for example, the Federal Circuit used the generally accepted forward chronology to determine that practice of the method recited in claim 1 of the earlier '213 patent (treating anxiety with Prozac) necessarily always resulted in the method of claim 7 of the later '549 patent (inhibiting serotonin uptake). Therefore *Eli Lilly's* '549 patent was held to be invalid for double patenting under the doctrine of inherency.⁶⁴

⁶⁰ *Id.*

⁶¹ *Id.* at 1880.

⁶² *Id.* at 1881.

⁶³ Or. with the earlier patent in a double patenting situation, such as in *Eli Lilly*. See above.

⁶⁴ See above.

The authors are unaware of a court decision that relied on the reverse chronology described above to analyze inherency. Nevertheless, it is interesting to speculate whether the result in *Eli Lilly* would have been affected by using the reverse chronology, i.e. by asking whether practice of the method recited in claim 7 of the later '549 patent (inhibiting serotonin uptake with Prozac) necessarily always results in the method of claim 1 of the earlier '213 patent (treating anxiety).

In answering this question, it must be remembered that inherency cannot be based on probabilities or possibilities. Inherency requires absolute certainty. See above.

The issue in a reverse chronology analysis, then, would be whether it might be possible for the administration of Prozac to inhibit serotonin uptake, and not simultaneously to treat anxiety. If so, it cannot be said that inhibiting serotonin uptake necessarily always results in treating anxiety, and the absolute certainty requirement for establishing inherency⁶⁵ is not satisfied.

It appears that it is possible for the administration of Prozac to inhibit serotonin uptake, and not simultaneously to treat anxiety. For example, a patient might take Prozac and not have anxiety in the first place. Alternatively, and by analogy to the *Zierden* case,⁶⁶ a patient suffering from anxiety might first take another drug to treat the anxiety, and then take Prozac to inhibit serotonin uptake.

According to this "reverse chronology" analysis, therefore, inherency would not be found. Therefore, use of the reverse chronology procedure in *Eli Lilly* does not lead to the same inherency conclusion reached by the Federal Circuit using the forward chronology procedure.

LEGAL STANDARD FOR DETERMINING INHERENCY

While the law with respect to inherency is generally well settled, one issue remains. The issue relates to the standard for determining whether a limitation is inherent in a disclosure.

In *Continental Can*, the Federal Circuit held that extrinsic evidence used to establish inherency "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill" (emphasis

⁶⁵ See the section entitled "The Requirement for Certainty" above.

⁶⁶ See above at footnote 5.

added).⁶⁷ In *Atlas Powder*, on the other hand, the Federal Circuit held that: "Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art."⁶⁸

The *Continental Can* rule and the *Atlas Powder* rule appear, at least on the surface, difficult to reconcile, a conclusion reached by Forbes.⁶⁹

Ebert, on the other hand, thought the two lines of cases could be reconciled based on the nature of the claimed element that was missing from the prior art. According to Ebert, if the element missing from the prior art relates to "scientific understanding," the element need not appear in the prior art. Ebert reasons that: "One cannot patent 'scientific understanding' of that which already was being done."⁷⁰

The apparent conflict over the standard for establishing inherency was addressed by the Federal Circuit for the first time in *EMI Group North America v. Cypress Semiconductor*.⁷¹ The case involved two U.S. patents of EMI (collectively, the EMI patents). U.S. 4,935,801 (the '801 patent) claims a structure for a metallic fuse for a semiconductor chip. U.S. 4,826,785 (the '785 patent) claims a method for making the fuse. The '801 patent is a divisional of the application that led to the '785 patent. The claims to the structure in the '801 patent and the claims to the method in the '785 patent both specifically recite a speculative mechanism by which the fuse can be blown with a low power laser.⁷²

According to the Federal Circuit, three prior art patents disclose a fuse for a semiconductor chip having the same structure as that recited in the claims of the EMI patents. The prior art patents were also said to disclose blowing the fuse with a low power laser, as well as a method of manufacturing the disclosed fuse.⁷³

The only difference between the prior art and the claims of the EMI patents was said to be the presence in the claims of the speculative, and previously unrecognized, mechanism by which the fuse was caused to be blown in the presence of a low energy laser.⁷⁴

⁶⁷ *Continental Can*, above at 1749. See also *Robertson*, above at 1950-1951 and *Telemac*, above at 1553.

⁶⁸ *Atlas Powder*, above at 1946-1947. See also *MEHL/Biophile*, above at 1306 citing *In re King*, above.

⁶⁹ See "Inherency in U.S. Patent Law," *The John Marshall Law School, Center for Intellectual Property Law News Source*, Vol. III, No. 1, Page 17 (Winter, 2001).

⁷⁰ See *Intellectual Property Today*, "Inherent Difficulties" Vol. 6, No. 11, (November 1999).

⁷¹ See above at footnote 53.

⁷² *Id.* at 1424.

⁷³ *Id.* at 1428-1429.

⁷⁴ *Id.* at 1427.

During trial in the District Court for the District of Delaware, the jury found the mechanism to be an inherent property of the fuse. *EMI*, above. The district court, however, granted *EMI*'s motion for judgment as a matter of law that its asserted claims are not anticipated or obvious.⁷⁵

The basis for the district court's granting of *EMI*'s JMOL motion was insubstantial evidence of inherency. The district court relied on the rule quoted above from *Continental Can* that when using extrinsic evidence to establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill" (emphasis added).⁷⁶ In other words, the district court held that Cypress Semiconductor could not establish inherency because the mechanism recited in the *EMI* claims was not "...recognized by persons of ordinary skill."

The Federal Circuit held that the district court improperly granted *EMI*'s JMOL motion. Therefore, the district court's decision was reversed, and the jury's finding that the claims are invalid as anticipated and obvious was reinstated.⁷⁷

According to the Federal Circuit:

This requirement, that a person of ordinary skill in the art must recognize that the missing descriptive matter is necessarily present in the reference, may be sensible for claims that recite limitations of structure, compositions of matter, and method steps which could be inherently found in the prior art. Such recognition by one of ordinary skill may be important for establishing that the descriptive matter would inherently exist for every combination of a claim's limitation. (Citing *In re Oelrich*, above.) ...Theoretical mechanisms or rules of natural law that are recited in a claim, that themselves are not patentable, however, do not need to be recognized by one of ordinary skill in the art for a finding of inherency. A person of ordinary skill does not need to recognize that a method or structure behaves according to a law of nature in order to fully and effectively practice the method or structure (citing, e.g. *MEHL/Biophile*, above).⁷⁸

⁷⁵ *Id.* at 1429.

⁷⁶ *Id.* at 1429, citing *Continental Can*, above, at 1268.

⁷⁷ *Id.* at 1430.

⁷⁸ *Id.* at 1429.

Writing for the Federal Circuit, Judge Rader explained that the prior art discloses fuses having structures identical to those recited in the claims. Moreover, according to Judge Rader, the prior art discloses blowing these fuses with the same low power lasers disclosed in the EMI patents. Accordingly, Judge Rader found the requisite substantial evidence for a reasonable jury to find inherency.⁷⁹

The *EMI* decision appears to agree with Ebert, see above. Thus, the “theoretical mechanisms or rules of natural law” of the *EMI* decision can be considered equivalent to the “scientific understanding” of the Ebert article. The *EMI* decision is also consistent with the *Atlas Powder* rule (“Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art”).

Despite all of this consistency, however, the panel that decided the *EMI* case did not have the authority to overrule the *Continental Can* case. Accordingly, the *Continental Can* rule still exists (“To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill”).

The authors believe all of the cases described above, including *Atlas Powder*, *Continental Can*, and *EMI*, can be reconciled. The cases appear to be consistent with the proposition that the ultimate standard for determining whether a claimed element is inherent in the prior art is the objective understanding of a person having ordinary skill.

The authors propose that the apparent conflict relates only to the timing of the objective understanding. *Continental Can*, *Atlas Powder*, *Robertson*, *Telemac*, *MEHL/Biophile*, and *EMI*, as well as the cases cited therein, all appear to be consistent with a single standard. If a person having ordinary skill presented with the facts would understand that the prior art inherently discloses a claimed element, the element is anticipated. It is irrelevant whether the understanding was apparent at the time of filing the application in question (as in *Continental Can*, *Robertson* and *Telemac*), or first becomes apparent at a later time (as in *Atlas Powder* and *MEHL/Biophile*). The objective understanding may, for example, first occur during trial.

⁷⁹ *Id.* at 1430.