

“State of the Art”, a Vitiated “Grace Period”? (con’d): More Blowback

More blowback has been received concerning the writer’s position in an earlier paper that the “state of the art” as of the filing date minimizes the value of the grace period for the inventor’s publications prior to that date.

The pdf version of this note includes the full blowback, a detailed and thoughtful presentation of a viewpoint sharply different from this writer. The presentation is authored by a prominent senior member of the profession.

Also included with the pdf version of this note are the writer’s initial paper as well as further emails.

Featured Topic in the Westlaw Monograph: The topic of the limitations to the grace period is one of the featured topics in a new Westlaw monograph under publication. Harold C. Wegner, *FIRST TO FILE PATENT DRAFTING: A PRACTITIONER’S GUIDE*; see particularly §§ 3:2 to 3:7, *Grace Period of Apparent but Realistically Minor Value* (Thomson Reuters forthcoming 2016).

Regards,
Hal

A respected senior member of the intellectual property community disagrees with this writer’s view concerning the limited impact of the grace period of the Leahy Smith America Invents Act of 2011.

That person’s detailed comments of October 3, 2016, are reproduced in toto (with minor changes shown in brackets):

If I understand correctly, [Wegner] suggest[s] the potential for the first-inventor-to-file “grace period” to be less effective than the first-to-invent system because of the following posited discrepancy—

(a) In determining non-obviousness, both the pre-AIA and AIA comparison of the *differences* between a claimed invention and the prior art under 35 U.S.C. § 103 necessarily exclude an inventor’s “grace period” public disclosures from the prior art in making this *differences* determination. Such disclosures constitute non-prior art disclosures, being excluded as prior art under 35 U.S.C. § 102(a)(2).

(b) However, the AIA § 103 determination of the *skill in the art of a person of ordinary skill in the art*, unlike the pre-AIA § 103 determination of the skill in the art, does not necessarily exclude the consideration of the inventor’s non-prior art “grace period” public disclosures. These “grace period” public disclosures, if they were to contribute to the *state of the art*, potentially may compel a obviousness finding for an invention that would have been non-obvious had the state of the art excluded the inventor’s non-prior art “grace period” disclosures.

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(c) The pre-AIA § 103 determination of the *skill in the art* accomplished this exclusion by assessing non-obviousness at as of the *date of the invention*, while the AIA § 103 determination of the *skill in the art* moved forward the non-obviousness assessment to the *effective filing date* of the claimed invention. It is this discrepancy between the invention and effective filing dates in the AIA that opens the door to considering the “grace period” inventor’s non-prior art disclosures as potentially relevant as *state-of-the-art* contributions.

If the above summary is correct, your analysis appears to me to be entirely dependent upon an implicit assumption, one that I do not believe can be correct. The posited difference in the AIA “grace period” appears to depend on the unstated assumption that, *for any claimed invention*, an inventor’s “grace period” disclosure would necessarily establish that the inventor’s *date of invention for the claimed invention* was *on or before* the “grace period” disclosure date.

While a publication can establish a date of conception *for any invention disclosed in the publication* (*i.e.*, an inventor cannot publish on subject matter not yet invented), most patent filings contain one or more—typically many more—claimed inventions than what might be disclosed in an inventor’s “grace period” publications. In those situations, the “date of invention” for some—in some cases all—of the *claimed inventions* in the “grace period” inventor’s subsequent patent filing may be *after* the “grace period” publication date.

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In all such situations, § 103—under both the AIA and the pre-AIA law—would operate *identically* with respect to any *state of the art* considerations. Under both laws for any claimed invention invented after the inventor’s “grace period” publication date, the state of the art would be determined in the same manner irrespective of whether § 103 provided the non-obviousness assessment was to be made as of the date of invention or the effective filing date for the claimed invention. Since this type of claiming-more-than-publishing situation was and is ubiquitous for first-to-invent patent filings, had the *state of the art* for pre-AIA § 103 purposes included the “grace period” inventor’s non-prior art disclosures, there would have been legions of patent prosecution and enforcement examples of where the failure to be able to make pre-disclosure proofs of a date of invention would have doomed non-obviousness.

That there is not even one example of this happening under the 1952 Patent Act seems to me to be evidence of a flawed premise, namely the premise that § 103 might be interpreted as though a “grace period” inventor’s non-prior art disclosures can somehow contribute to the state of the art. The only conceivable reason, therefore, that such legions of examiner rejections and reported invalidity determinations have not turned on the *state of the art* is that the “grace period” inventor’s non-prior art disclosures are of no relevance to the state of art. Thus, whether the AIA § 103 based non-obviousness at the effective filing date or the date of invention, the “grace period” effectiveness differs not at all between the first-to-invent and the first-inventor-to-file worlds.

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Let me explain my thinking on this point in some additional detail and with some examples.

First of all, first-to-invent patent applications are examined as though the date of invention for each claimed invention is no earlier than its effective filing date. In most situations, the entire examination and enforcement processes for a patent are undertaken on this assumption. Unless the inventor offers proofs of an earlier date of invention, the pre- and post-AIA § 103 provisions operate in an identical manner in the assessment of both the *differences* and the *state of the art*.

For this reason, there is a very limited practical, real-world difference between the practice in fact under the first-to-invent regime and the first-inventor-to-file regime as it relates to the non-obviousness determination. Under the old first-to-invent law, unless the patent applicant or patent owner submitted evidence for a date of invention, patent examination and patent validity determinations all took place by limiting the inventor’s date of invention for each claimed invention to the effective filing date of that claimed invention. For perhaps 95 % or more of all first-to-invent patent applications ever examined, no date of invention proofs of invention have been submitted—either to overcome “prior art” for the *differences* assessment or to overcome “prior art” for *state of the art* purposes.

If one considers only the subset of patent examinations where the inventor took advantage of the first-to-invent “grace period,” the statistics are no different. Most tellingly, there was simply no pre-AIA examination practice specific to inventors, who having made a “grace period” public disclosure, were ever thereafter obliged to establish an earlier date of invention so that the “grace period” disclosure would

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not count towards the *state of the art*. As discussed above, had the first-to-invent law been such that the “state of the art” could include an inventor’s own non-prior art “grace period” disclosures—absent a proven earlier date of invention—proofs of invention dates would have been routinely requested during patent examination and submitted for this purpose.

Instead, however, it is unknown under the first-to-invent “grace period” for the “grace period” inventor to submit invention date proofs in order to remove the inventor’s non-prior art “grace period” public disclosure from the “state of the art” for the purposes of determining the level of “skill in the art.” It is similarly unknown for a patent examiner to seek evidence of a pre-filing invention date for the purpose of removing the inventor’s “grace period” public disclosure from the state of the art for a skill-in-the-art determination.

A few examples are illustrative of this point.

Suppose an inventor publishes a “grace period” paper disclosing only the *enabling technology* for a claimed invention, but the conception for that claimed invention making use of the enabling technology takes place days or months later. Under the first-to-invent law, if the “state of the art” of the person skilled in the art included the inventor’s non-prior art publication, the inventor would be precluded from relying on the lack of any known or obvious method for making the invention to establish non-obviousness (*In re Herman Hoeksema*, 399 F.2d 269 (CCPA 1968))—if the “state of the art” used to determine the “skill in the art” included the non-prior art “grace period” public disclosure. There has never been a first-to-invent case of this type where the inventor has been precluded from making the

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Hoeksema argument because it had no pre-publication invention date. Nor has there been a case where a “grace period” inventor making the *Hoeksema* argument has ever been asked to justify entitlement to make the *Hoeksema* argument by establishing, claim-by-claim, the respective dates of invention for each.

The same analysis applies to the far more common situation where the “grace period” publication discloses a generic concept (genus) and the inventor—in the days and months that follow—then invents a collection of novel species falling with the genus not anticipated by the genus. (Under *In re Petering*, 301 F. 2d 676 (C.C.P.A. 1962), a “small” genus can anticipate each species within the genus). Under those facts in the first-to-invent world, the “grace period” inventor could be precluded from patenting such species not anticipated by the genus unless evidence was offered that each such species represented a non-obvious selection from the genus—if the “state of the art” used to determine the “skill in the art” included the inventor’s non-prior art “grace period” public disclosure. No first-to-invent “grace period” inventor, however, has ever been put to such a species-by-species test based on the contention that no pre-publication date of invention had been established for each species within a broader public disclosure not anticipating each such species.

The *vice versa* facts would produce the potential for a more draconian outcome if the “state of the art” used to assess the “skill in the art” for a claimed invention included an inventor’s non-prior art public disclosures. Because “anticipation is the epitome of obviousness” (*In re McDaniel*, 293 F3d. 1379, 1385 (Fed. Cir. 2002)), where the “grace period” publication discloses a species and the inventor—in the days and months that follow—then invents a broader, more generic

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disclosure, the genus would be obvious under the first-to-invent law if the species were part of the “state of the art” and determines the level of “skill in the art.” An inventor would be precluded from patenting all the more generic claims in any situation where the generic concepts arose even a day later than the “grace period” publication date of the species.

The analysis is no different in a species vs. species situation in which the inventor publishes on one species and then subsequently invents and claims a second species in its patent filing. Such an inventor under the first-to-invent regime—if the “state of the art” included the inventor’s non-prior art published species—would need to establish species-over-species non-obviousness.

As noted above, when the “grace period” has been invoked by the inventor in this first-to-invent context to negate prior art, there are no reported decisions—and no USPTO patent examination practices—where the inventor has ever been called upon to either establish a pre-disclosure date of invention for any claim on the grounds that the “grace period” public disclosure would otherwise be considered as part of the “state of the art.” Since the vast majority of “grace period” publications are not evidence by themselves of the date of invention for each of the claimed inventions in a patent filing that might lack non-obviousness over the “state of the art” taking account of the “grace period” inventors’ non-prior art public disclosure, demands for invention date proofs for this purpose should have been routine for first-to-invent “grace period” inventors.

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If such were the case, it presumably would now be well settled that the “state of the art” for § 103 purposes is informed by a “grace period” inventor’s non-prior art public disclosure—unless the inventor can establish an earlier invention date for the claimed invention at issue. However, the fact this issue has never arisen under the 1952 Patent Act suggests that the proper interpretation of § 103 of the 1952 Patent Act—and AIA § 103 as well—is that the *state of the art* is not informed by a “grace period” inventor’s non-prior art public disclosures. This appears to be the only logical conclusion to draw. Moreover, it would seem on its face to be a largely self-evident one. Non-prior art public disclosures ought not to inform the state of the art for non-obviousness purposes.

What this all suggests is that the change in the AIA version of § 103 from a reference to a “date of invention” to a reference to the “effective filing date” will not result in any change whatsoever in the practice of assessing the “state of the art” used to assess “ordinary skill” used to assess the “difference” used to assess obviousness. The fact that AIA bars use of invention date proofs under § 103 is simply irrelevant with respect to patentability—the bar that now exists functions to prevent proofs of dates of invention that were simply never required anyway to established patentability under pre-AIA § 103 since the “state of the art” was never informed by a “grace period” inventor’s non-prior art public disclosures.

Lastly, 35 U.S.C. § 112 references a person *skilled in the art* for the purpose of determining the adequacy of the written description/enablement for a claimed invention. It would appear essential for § 103 and § 112 to be given a consistent interpretations with respect to what the “state of the art” might be. I believe that

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this objective of consistency actually drives § 112 to be interpreted to the same effect as for § 103 as described above.

The above interpretation would essentially require an inventor to disclose the enabling technology for a claimed invention in its patent filing, even if the inventor had prior-published on that technology. Such a rule would best serve the “disclosure” function of the patent system. It would avoid any possible inventor temptation to game-playing. The inventor’s critical, enabling technology should appear in within the four corners of the inventor’s patent filing, not just in an inventor’s “grace period” library thesis, perhaps cataloged in only a single library, perhaps located in a distant foreign land. A “grace period” inventor should not be entitled to survive an enablement challenge by pointing to such a hard-to-locate “public disclosure.”

Thus, it is a far better patent policy if the claimed inventor is obliged to rely on a *state of the art* for written description/enablement purposes that excludes non-prior art public disclosures, such as the inventor’s “grace period” disclosures, in order to encourage a bit more fulsome patent disclosures. Such a policy should apply equally to § 103 state of the art determinations. Taking the opposite approach—that such non-prior art disclosures should count towards the state of the art—would simply stand as contrary to good patent policy.

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As to the bottom line, for me it is pretty simple. For inventors awaiting a test case under the AIA, it is possible that it could be a long wait—we are still waiting for the first case under the 1952 Patent Act contending that a “grace period” inventor’s non-prior art disclosures form part of the *state of the art* with respect to all claimed inventions made after the “grace period” disclosure date. Even if a long wait, hopefully the wait will engender little anxiety as to the eventual outcome.

“State of the Art” vs. Grace Period (*con’d*): EPC and Japan Approaches

Further to the Sept. 22nd email, the fundamental problem with the American grace period is the different approach taken versus the European Patent Convention and the Japan Patent Law:

Only in the American grace period are grace period events excluded for *novelty* but not for determining whether an invention is *obvious*, as explained in the pdf version of this note (which also includes as attachments the prior discussion).

Regards,
Hal

September 23, 2016

The fundamental problem with the American grace period is that while grace period events before the effective filing date are excluded from the *novelty*-defeating provisions through 35 USC § 102(b), such grace period events are *not* excluded from the state of the art for determining obviousness under 35 USC § 103.

To the contrary, the obviousness provision of 35 USC § 103 denies patentability “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious ***before the effective filing date*** of the claimed invention to a person having ordinary skill in the art ***.” Thus, the grace period events excluded from the novelty-defeating provisions through Section 102(b) are *included* within the state of the art to establish obviousness under Section 103.

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A Different Approach in Europe and Japan

Neither the European nor Japanese system has the same problem because in the grace period in both areas, the grace period specifically *excludes* grace period events from the state of the art to determine patentability.

Just as the United States defines novelty in 35 USC § 102(a) to include grace period-exempt disclosures, the EPC in Art. 54(1) and the Japan Patent Convention in Art. 29(1) does the same thing.

Then, grace period exclusions are found in the U.S. patent law in 35 USC § 102(b), in the EPC in Art. 55(1) and the Japan Patent Law in Art. 30(1).

But, it is the *manner* of the exclusion that differs between what is done in the United States and abroad: 35 USC § 103 does not exclude grace period publications from the state of the art to determine nonobviousness, whereas the approach in Europe and Japan is to altogether *exclude* the grace period publications from the state of the art.

In both the European Patent Convention in Art. 54(1) and the Japan Patent Office in Art. 29(1) each first defines novelty and then each text *excludes* as prior art the grace period events. *See* EPC Art. 55(1), *Non-Prejudicial Disclosures* (“For the application of [the novelty-defeating state of the art under EPC] Article 54, **a disclosure of the invention shall not be taken into consideration** if it occurred no earlier than six months preceding the filing of the European patent application” as to specifically defined acts.)(emphasis added); Japan Art. 30(1)(“In the case of an invention which has fallen under any of the [novelty-defeating provisions] of Article 29(1) [under certain conditions] **such invention shall be deemed not have fallen under any of the items of Article 29(1) for the purposes of Article 29(1)** *** for the invention claimed in a patent application which has been filed by the said person within six months from the date on which the invention first fell under any of those items.”)(emphasis added).

Inventor's Publication Before Filing and the "State of the Art"

Recently, this writer published a paper dealing with the situation where, in essence, the following happens where the inventor publishes before filing:

(a) On "Day One" the inventor publishes his invention, thereby elevating the level of skill in the art to make that invention part of a very high level of the "state of the art" **as of that date**.

(b) On "Day Two" the inventor files a patent application to this invention, but the high level of the "state of the art" on that date renders the invention obvious.

Critical Change in the Law: Under the law prior to the *Leahy Smith America Invents Act* of 2011, the "state of the art" was measured as of the *invention date*, so the grace period would save the inventor in the above situation. Now, however, under the new law the state of the art is measured **as of the filing date**. Wherefore, his invention is obvious to a worker skilled in the art on this critical date.

Blowback! Sharp disagreement has been expressed with the above analysis by an informed observer, attached *in toto* together with the original paper of this author.

What's the Correct View? Let's wait and see what a test case will determine.

Regards,
Hal

Response to the Paper

Sept. 22, 2016

If I understand your paper correctly, is what you are saying—in effect—that the pre-URAA patent law (*i.e.*, old 35 U.S.C. § 104), under which one-half of patent applicants had non-obviousness determined based upon the level of skill in the art (and the state of the art) as of the effective filing date of their claimed inventions, now applies in this respect to all inventions of all patent applicants? When the law for foreign-based patent applicants and U.S.-based applicants was different (*e.g.*, during the century before the URAA), did that difference in the law ever actually make a practical difference in a patentability outcome for inventors who published before their patent filings? I don't recall a case actually turning on the issue in your paper.

SHIFTING SANDS: AN EVOLVING STATE OF THE ART OVER TIME (DEATH OF A RELIABLE PATENT “GRACE PERIOD”)

Harold C. Wegner

Abstract

Early filing under the *Leahy Smith America Invents Act* of 2011 avoids establishment of a patentee-unfriendly higher level of the obviousness-determinant “state of the art” fixed at the *patent filing date*. (Under the prior law, the state of the art for determining obviousness was fixed at lower inventor-friendly *invention date*.) Problems arise for inventor disclosures prior to the filing date where:

- the inventor publishes or otherwise makes available to those skilled in the art information that establishes a higher level of “skill in the art”, *even though* that information may not qualify as “prior art;”
- the inventor (or another) has disclosed theoretical information at a scientific conference that raises the “state of the art” to provide *motivation* to combine prior art references and hence render an invention obvious; and
- the state of the art once provided no motivation to make the invention at the time the invention was made, but, over time (and prior to the filing date), the state of the art evolved to the point that motivation to make the invention *was* present.

Additionally, the academic institution patent filing model of publication prior to first filing is broken: That model cannot be *prospectively* relied upon.

[[ShiftingSandsSep23.pdf](#)]

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WESTLAW *FIRST TO FILE PATENT DRAFTING* MONOGRAPH

This paper is based upon the monograph:

**Harold C. Wegner, *First to File Patent Drafting:
A Practitioner's Guide***

particularly §§ 3:2 to 3:7, *Grace Period of Apparent but
Realistically Minor Value* (Thomson Reuters forthcoming
2016).

I. OVERVIEW

The *Leahy Smith America Invents Act* of 2011 places great pressure on the patent applicant community to promptly file a patent application as soon as possible after the invention has been made:

An obvious reason is the “first to file” aspect of the new patent law where the failure to be first to file may jeopardize gaining any patent right at all. It has also been widely recognized that there *is* a grace period, but in some ways the grace period is problematic: Under the literal wording of the new patent law certain acts following an inventor’s disclosure will void the possibility to safely use the grace period.

More fundamentally – even without any publication of the invention prior to filing in the interval between the date of making the invention and the filing date – the state of the art may have become significantly elevated such that an invention that was clearly inventive (nonobvious) when made is now, at the later date of filing, clearly obvious over an elevated state of the art at the date of filing.

While an early filing is indicated, it could be one that is based upon a well thought out patent application: A hasty filing is dangerous because at the end of the prosecution rainbow there sits the nine month period for a Post Grant Review (PGR) where formalities errors can be used to attack the validity of the claims.

This paper commences with the issue that obviousness is determined based upon the state of the art *at the filing date* (instead of the old law where this metric was judged as of the *invention date*). See § II, *Obviousness as of Filing Date vs. Date of Invention*. Thus, the state of the art to measure nonobviousness now includes activities in the art *after* the invention date but before the filing date. See § II-A, *Post-Invention Pre-Filing Date Level of Skill in the Art*.

The “state of the art” is particularly important in the context of the new law: There *is* a grace period for the inventor’s disclosures as “prior art”; but, under the literal wording of the law, there is no grace period applicable to the state of the art. (It remains to be seen how this issue will be decided in a test case at the Federal Circuit, one not yet on the radar screen.) See § II-B, *“Prior Art” vs. Level of Ordinary Skill in the Art*.

Wegner, *Shifting Sands*

The argument may be made that “prior art” and “state of the art” should be treated as synonyms. But, this goes against reality. See § II-C, “*Prior Art*” vs. “*State of the Art*”.

It is also very important to recognize that *each claim* may have a different priority date as priority is evaluated on a claim by claim basis, so the *date* of the state of the art may be different for different claims. See § II-D, *Claim by Claim* “*Effective Filing Date.*”

Given that nonobviousness is measured in terms of the state of the art *as of the filing date* it is all the more important that an application be filed at the point of the lowest level of the state of the art, i.e., as early as possible. See § III, *State of The Art*” to *Determine Obviousness.*

Historically in the mid-nineteenth century, a focus on the state of the art to determine obviousness began as a determination of whether there was or was not the presence of “invention” under *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851). Early “state of the art” case law includes *Le Roy v. Tatham*, 55 U.S. (14 How) 156 (1852)(McLean, J.). See § III-A, “*State of the Art*” *Genesis in the wake of Hotchkiss v. Greenwood*

In the wake of *Graham v. John Deere Co.*, 383 U.S. 1 (1966), and *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Federal Circuit has developed a rich body of modern case law dealing with the “state of the art”. § III-B, *Federal Circuit Treatment of the “State of the Art”*

As part of the analysis of nonobviousness the Federal Circuit has developed case law dealing with “common knowledge”. See § III-C, “*Common Knowledge*” to *Deny Patentability.* Particularly in *ex parte* prosecution it was difficult to consider “common knowledge” in patent challenges because the identity and date of such “common knowledge” was difficult to precisely pin down. See § III-D, *Concrete Evidence to Pin Down “Common Knowledge.”* Now, however, where there is a publication of subject matter prior to the filing date that may not be “prior art” because of the grace period, is that same subject matter part of the state of the art to establish the level of ordinary skill in the art? See § III-E, *Pre-Filing Date Evidence of the State of the Art.*

Wegner, *Shifting Sands*

While there is every reason to file promptly both to benefit from a lower level of the state of the art and also to better avoid accidental disclosures prior to the filing date, there is a complementary reason to make sure that the application is filed before publication. Reliance on the “grace period” is problematic because, for example, an admirer of the inventor upon learning of the inventor’s new subject matter may well publish on his own *variation* of that new subject matter, where that *variation* is prior art not excused by the grace period. So, if the inventor publishes his invention “today”, the admiring colleague publishes on the variant “tomorrow” and the inventor files his patent application the “day after tomorrow”, that obvious variation will be patent-defeating prior art without consideration of a grace period. *See* § IV, *Third Party Publication of an Obvious Variant*.

Another reason to file promptly is that the grace period applies to “disclosures” of the invention; but, there are prior art activities which are not literal “disclosures”. Are such non-disclosure prior art events within the ambit of the grace period? Only with a definitive judicial answer in a test case will we know the answer. *See* § V, *Prior Art that does not “Disclose” The Invention*.

A still further reason to file promptly is that even if a patent claim is valid over the “state of the art”, a heightened state of the art may create a narrower effective scope of protection under well established Supreme Court case law dating back to the second half of the nineteenth century. *See* § VI, *“State of the Art” to Establish Protection Scope*.

II. OBVIOUSNESS AS OF FILING DATE VS. DATE OF INVENTION

A. Post-Invention Pre-Filing Date Level of Skill in the Art

It may not be sufficient to refrain from publication of an invention before filing. An invention which is clearly patentable as of the invention date may well be unpatentable as obvious under 35 USC § 103 as of the filing date: The date to measure the state of the art for purposes of Section 103 is no longer the date of invention but now is the filing date. Dean Holbrook explains:

“[P]atent applicants must show that they are the first to possess the invention not only by being the first to invent (under the 1952 Act) or the first to file (under the AIA), but also by being first relative to general knowledge, i.e. the state of the

Wegner, *Shifting Sands*

art. The impact is to change our date of interest for assessing novelty and non-obviousness, with the 1952 Patent Act primarily concerned with the state of the art as of the date of invention and the AIA is focused on the filing date.” Timothy R. Holbrook, *Patent Anticipation and Obviousness as Possession*, 65 Emory L.J. 987, 994 (2016)(footnote deleted).

Thus, the date to determine the state of the art under 35 U.S.C.A. § 103 for determining obviousness is now the *filing date* of the application: An invention is obvious (and hence unpatentable) “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious *before the effective filing date* of the claimed invention to a person having ordinary skill in the art[.]”

This is in marked contrast to prior Section 103(a) where determined nonobviousness was measured “at the time the invention was made.” Thus, under the law prior to the *Leahy Smith America Invents Act* one considered the level of ordinary skill in the art to be as of the date of *invention*: The prior art that could be considered as part of the level of ordinary skill in the art was congruent with the state of the prior art as of the date of the *invention*. Now, however, the level of ordinary skill in the art is measured as of the *filing date* so that the inventor’s publication of the invention in the one year grace period prior to the filing date is not “prior art” but may under the literal wording of the law be considered as part of the knowledge of a person of ordinary skill in the art as of the *filing date*.

B. “Prior Art” vs. Level of Ordinary Skill in the Art

That there is a difference between the “prior art” and the “level of ordinary skill in the art” is first of all seen from the separate *Graham* factors:

“Obviousness is a question of law based on underlying facts, as set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *Graham* factors are (1) the scope and content of the *prior art*, (2) the difference between the prior art and the claimed invention, (3) the *level of ordinary skill* in the field of the invention, and (4) any relevant objective considerations.” *Soverain Software LLC v. Newegg Inc.*, 705 F.3d 1333, 1336 (Fed. Cir. 2013)(emphasis added). *See also Daiichi Sankyo Co., Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir., 2007)(Archer, J.)(quoting *In re Dembiczak*, 175 F.3d 994, 998 (Fed.Cir.1999)) (“ The underlying factual inquiries in an obviousness analysis include: ‘(1) the scope and content of the prior

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art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness.’ * * *”); *see also Env'tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed.Cir.1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381-82 (Fed.Cir. 1983))(“Factors that may be considered in determining level of ordinary skill in the art include: (1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.”)

When the level of skill in the art is measured as of the *filing date* then the argument can be made that the knowledge of a worker of ordinary skill in the art certainly includes the grace period pre-filing publication by the inventor. “When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 402-03 (2007).

C. “Prior Art” as Indicator of the “State of the Art”

“Prior art” is one determinant of the “state of the art”. In other words, “prior art” is one (and often the most important) factor in the determination of “state of the art”. *In re Ryan*, 480 F.2d 1388, 1389 (CCPA 1973)(Lane, J.) (“[T]he subject matter would have been obvious to *one of ordinary skill in the art* in light of the *state of the art*[.]”)(emphasis added); *In re Zenith*, 333 F.2d 924, 926 (CCPA 1964)(Worley, C.J.) (“[T]he question [is] whether the differences between [the claimed] invention and *the state of the art* at the time the invention was made *** are such that the subject matter as a whole would have been obvious to a *person having ordinary skill in the art* to which said subject matter pertains.”) (emphasis added); *In re Thompson*, 438 F.2d 613, 616 (CCPA 1971)(Almond, J.) (citing *In re McKenna*, 203 F.2d 717 (CCPA 1953)) (“[T]he *state of the art* should be considered in determining if the invention would have been obvious to *one of ordinary skill in the art* at the time the invention was made.”) (emphasis added); *In re Wallach*, 378 F.3d 1330, 1334 (Fed. Cir. 2004) (“[T]he *state of the art* has developed such that the complete amino acid sequence of a protein may put one in possession of the genus of DNA sequences encoding it, and that *one of ordinary skill in the art* at the time the [] application was filed may have therefore been in possession of the entire genus of DNA sequences[.]”)(emphasis added).

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In the context of the grace period of the Leahy Smith America Invents Act of 2011, it is clear that the grace period *does* apply to “prior art”, but does not necessarily apply to the overall state of the art.

The question, then, is whether the grace period applies to the “state of the art” (beyond instances where a particular reference refers to a prior art event).

The case law (interpreting the old law) repeatedly comes back to consideration of the state of the art at the time the invention was made. *See In re McKenna*, 203 F.2d 717, 720 (CCPA 1953)(citing *In re Holt*, 162 F.2d 472 (CCPA 1947); *In re Bowden*, 183 F.2d 115 (CCPA 1950); *In re Worrest*, 201 F.2d 930 (CCPA 1953); *Jones v. Hardy*, 727 F.2d 1524, 1529 (Fed. Cir. 1984)’ *In re Piasecki*, 745 F.2d 1468, 1473 (Fed. Cir. 1984)(citing *McKenna*); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir.1985); *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1380 (Fed. Cir. 2012)(quoting *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1273 (Fed.Cir.1991).

The change in the law is particularly dramatic in terms of nonobviousness under 35 USC § 103, given the heightened state of the prior art for obviousness in situations where there is a significant time interval between the date of invention and the filing date:

In the context of the garden variety inquiry whether it is or it is not “obvious” to combine references “A” and “B” to teach the claimed invention so that an invention is “obvious” under 35 USC § 103, essentially the identical test to determine obviousness is made both before and after the effective date of the *Leahy Smith America Invents Act* of 2011 (assuming that references “A” and “B” are prior art in both instances). The major difference is in making the determination under Section 103 of the new law is whether “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious *before the effective filing date* of the claimed invention to a person having ordinary skill in the art[.]” Under the old law, the same question was asked in the timeframe at the time the invention was made.

What happens if the state of the art becomes more highly advanced in the interval between the date the invention was made and the filing date? The answer is simple: While an invention may be obvious at the later date (the date the

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application was filed), that invention may not have been obvious at the earlier time the invention was made.

To put the change in the law in context of Section 103, a good case study is *Nike, Inc. v. Adidas AG*, 812 F.3d 1326 (Fed. Cir. 2016)(Chen, J.), where the time frame used was of the *old law*. Thus, under the old law:

“Section 103 forbids issuance of a claim when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.’ 35 U.S.C. § 103. The ultimate determination of obviousness under § 103 is a question of law based on underlying factual findings. *In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1361 (Fed.Cir.2012) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). These underlying factual considerations consist of: (1) the ‘level of ordinary skill in the pertinent art,’ (2) the ‘scope and content of the prior art,’ (3) the ‘differences between the prior art and the claims at issue,’ and (4) ‘secondary considerations’ of non-obviousness such as ‘commercial success, long-felt but unsolved needs, failure of others, etc.’ *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting *Graham*, 383 U.S. at 17–18).

“A claimed invention may be obvious even when the prior art does not teach each claim limitation, so long as the record contains some reason why one of skill in the art would modify the prior art to obtain the claimed invention. *See Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1307 (Fed.Cir.2006). *** Although an analysis of the teaching, suggestion, or motivation to combine elements from different prior art references is helpful, we must always be mindful that an obviousness inquiry requires an ‘expansive and flexible approach.’ *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed.Cir.2012) (citing *KSR*, 550 U.S. at 415, 419). Importantly, we have repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor. *Id.*” *Nike, Inc. v. Adidas AG*, 812 F.3d at 1334-35.

D. Claim by Claim “Effective Filing Date”

The “effective filing date” to determine the date of the state of the art is *not necessarily* the same for all claims in an application. The analysis is conducted on a claim by claim basis. Thus, it is well settled that priority is determined *for each claim* and not for the “application”. The priority is determined on a claim by claim basis such that the “effective filing date” may be different for various claims within the same patent. See Wegner monograph (*supra* p. 2), § 11:23, *Claim by Claim Priority Basis* (quoting *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326 (Fed. Cir., 2008)(Plager, J.), citing *Transco Prods. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 556 (Fed.Cir.1994)).

1. Paris Convention Priority

Approximately one in every two patents granted in the United States has a Paris Convention claim of priority under 35 USC § 119. Often in such a situation, *some claims and some supporting disclosure* are presented for the first time in the United States application. Here, it is possible that “claim 1” may be based upon the “home country” priority application and be entitled to priority based on that application, while “claim 17” may be based on newly developed disclosure and appear for the first time in the United States application and *not* be entitled to priority.

In this situation, “claim 1” is entitled to priority under the Paris Convention and 35 USC § 119, so that the “effective filing date” for purposes of determining the state of the art for *that* claim will be the “home country” priority application date. But, “claim 17” stands naked as of the United States application *actual* filing date.

The significance of the different effective filing dates for “claim 1” and “claim 17” is that the state of the art for “claim 1” is determined as of the Paris Convention priority date while the state of the art for “claim 17” is measured as of the actual United States filing date: This means that if there is a higher state of the art as of the United States filing date then “claim 1” may well be nonobvious versus the lower state of the art whereas “claim 17” is obvious over the higher state of the art.

As a practical matter, the problem will occur quite frequently for the situations where the inventor publishes the subject matter of his application

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between the Paris Convention priority date and the actual United States application date, as such publication instantly raises the state of the art.

2. Domestic (Continuing Application) Priority

The denial of priority based upon a domestic application, and the bar against claims in a continuation-in-part is an old story under the *Steenbock* line of case law. See Wegner monograph (*supra* p. 2), § 11:24, *Priority to Genus of Different Scope* (discussing *In re Steenbock*, 83 F.2d 912 (CCPA 1936); *In re Ruscetta*, 255 F.2d 687 (CCPA 1958)(Rich, J.)).

The *Steenbock* problem is particularly acute where “claim 1” of the United States application has a *different scope* of generic protection than disclosed in the parent. Here, “claim 1” may be denied priority so the “effective filing date” is the *actual* filing date.

III. “STATE OF THE ART” TO DETERMINE OBVIOUSNESS

Whether the “state of the art” can or could be used to establish “motivation” or other aspect of obviousness of an invention disclosed to the public prior to the filing date depends upon whether one is referring to a situation under the law *prior to the Leahy Smith America Invents Act* of 2011 (where the state of the art was measured as of the *invention date*) or under that new law (where the state of the art is measured as of the *effective filing date* which can be long after the invention date).

Under the *Leahy Smith America Invents Act* of 2011, a reference which is not “prior art” may be used to show the “state of the art” when published prior to the effective filing date. *Le Roy v. Tatham*, 55 U.S. (14 How) 156, 180 (1852)(McLean, J.); *Winans v. New York & E.R. Co.*, 62 U.S. (21 How.) 88, 100 (1858)(Grier, J.); *se also Blanchard v. Beers*, 3 F.Cas. 617, 618 (C.C.D. Conn. 1852)(No. 1506) (Nelson, J., charging jury); *Pitts v. Wemple*, 19 F. Cas. 762, 763 (C.C.N.D. Ill. 1855)(No. 11, 194)(Drummond, J., charging jury).

A. “State of the Art” Genesis in the Wake of *Hotchkiss v. Greenwood*

“State of the art” has a rich judicial history prior to the 1952 Patent Act as a complement to determining under *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851), whether claimed subject matter possessed “invention”, codified in the 1952 Patent Act as nonobviousness under 35 USC §103.

The Supreme Court made reference to the “state of the art” in *Le Roy v. Tatham*, 55 U.S. (14 How) 156, 180 (1852)(McLean, J.), the year after it established the standard of a patentable “invention” in *Hotchkiss*, 52 U.S. (11 How.) at 267. *See also Winans v. New York & E.R. Co.*, 62 U.S. (21 How.) 88, 100 (1858)(Grier, J.); *see also Blanchard v. Beers*, 3 F.Cas. 617, 618 (C.C.D. Conn. 1852)(No. 1506) (Nelson, J., charging jury); *Pitts v. Wemple*, 19 F. Cas. 762, 763 (C.C.N.D. Ill. 1855)(No. 11, 194)(Drummond, J., charging jury).

Early in the twentieth century the Court in *Cimiotti Unhairing* explained that “[i]n determining the construction to be given to the claim in suit [for purposes of infringement analysis] it is necessary to have in mind the nature of this patent, its character as a pioneer invention or otherwise, and the *state of the art at the time when the invention was made.*” *Cimiotti Unhairing Co. v. American Fur Refining Co.*, 198 U.S. 399, 406 (1905)(Day, J.).

In the current era, *Graham v. John Deere & Co.*, 383 U.S. 1, 17 (1966), makes explicit reference to the “ordinary skill in the pertinent part” as part of the standard of nonobviousness:

“[T]he § 103 condition *** lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of *ordinary skill in the pertinent art* resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.” (emphasis added).

B. Federal Circuit Treatment of the “State of the Art”

As explained in *In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009)(Rader, J.), “[a]n analysis of obviousness must be based on several factual inquiries: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) *the level of ordinary skill in the art at the time the invention was made*; and (4) objective evidence of nonobviousness, if any. See *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).” (emphasis added)

Consider the situation where a scientific conference provides documentary evidence for its members in the form of an abstract of the inventor’s upcoming speech: It is circulated to the membership before the conference – and before the inventor files his patent application. Whether or not this documentary evidence is a “printed publication” under Section 102(a)(1) or not, is this abstract a summary of the “state of the art” as of its publication date prior to the effective filing date?

In a nutshell, 35 USC § 102(a)(1) denies a patent where “the claimed invention was *** described in a printed publication *** before the effective filing date of the claimed invention[.]” But, under 35 USC § 102(b)(1)(A), “[a] disclosure made 1 year or less before the effective filing date of a claimed invention shall not be *prior art* to the claimed invention under [35 USC § 102](a)(1) if the disclosure was made by the inventor or joint inventor ***.” (emphasis added).

C. “Common Knowledge” to Deny Patentability

Concerning establishment of the state of the art under the prior law, Judge Taranto explains in *Randall v. Rea* that:

“Th[e] ‘expansive and flexible approach[]’ [to establish obviousness, *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415, 705 (2007)], is consistent with our own pre-*KSR* decisions acknowledging that the inquiry ;not only permits, but **requires**, consideration of common knowledge and common sense.’ *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed.Cir.2006).

“*** [T]he Board failed to account for critical background information that could easily explain why an ordinarily skilled artisan would have been motivated to combine or modify the cited references to arrive at the claimed inventions. As *KSR* established, the knowledge of such an artisan is part of the store of public knowledge that must be consulted when considering whether a claimed invention would have been obvious.

“In recognizing the role of common knowledge and common sense, we have emphasized the importance of a factual foundation to support a party’s claim about what one of ordinary skill in the relevant art would have known. *See, e.g., Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1377 (Fed.Cir.2012); *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328 (Fed.Cir.2009). **One form of evidence to provide such a foundation, perhaps the most reliable *** is documentary evidence consisting of prior art in the area.** *Randall* relied on just such evidence in citing to extensive references of record showing a familiar, even favored, approach to bulkhead stowage. *** The significance of [such documentary evidence] did not depend on any attempt to change the combination that formed the basis of the Examiner’s rejections; rather, **the references constitute important evidence of the state of the art** and the context in which the Examiner-cited combination should be evaluated.” *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362-63 (Fed. Cir. 2013)(emphasis added).

Circuit Judge O’Malley in *Arendi v. Apple* confirms that the state of the art *can* be used to establish whether the invention is or is not obvious:

“It is true that common sense and common knowledge have their proper place in the obviousness inquiry. We stated in *Perfect Web* that ‘[c]ommon sense has long been recognized to inform the analysis of obviousness if explained with sufficient

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reasoning.’ [*Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328 (Fed.Cir.2009)]. And we stated in *Randall* that ‘[i]n *KSR*, the Supreme Court criticized a rigid approach to determining obviousness based on the disclosures of individual prior-art references, with little recourse to the knowledge, creativity, and common sense that an ordinarily skilled artisan would have brought to bear when considering combinations or modifications.’ *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (citing *KSR [Int’l Co. v. Teleflex Inc.]*, 550 U.S. 398, 415-22 (2007)); see also *DyStar [Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.]*, 464 F.3d 1356, 1367 (Fed.Cir.2006)]. Hence, we do consider common sense, common wisdom, and common knowledge in analyzing obviousness. ” *Arendi S.A.R.L. v. Apple Inc.*, __ F.3d __, 2016 WL 4205964 (Fed. Cir. 2016)(O’Malley, J.).

D. Concrete Evidence to Pin Down “Common Knowledge”

But, as also explained by Judge O’Malley in the context of a case prior to the *Leahy Smith America Invents Act* of 2011, there were three good reasons why the state of the art could not generally be used to establish obviousness of an invention. As explained by Judge O’Malley in *Arendi v. Apple*:

“[T]here are at least three caveats to note in applying ‘common sense’ in an obviousness analysis. First, [citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356 (Fed.Cir.2006).] common sense is typically invoked to provide a known motivation to combine, not to supply a missing claim limitation. * * * Second, in *Perfect Web [Techs., Inc. v. InfoUSA, Inc.]*, 587 F.3d 1324, 1328 (Fed.Cir.2009), identified as a case] in which common sense was invoked to supply a limitation that was admittedly missing from the prior art, the limitation in question was unusually simple and the technology particularly straightforward. * * * Third, [citing, *inter alia*, *In re Zurko*, 258 F.3d 1379, 1383, 1385 (Fed. Cir. 2001),] our cases repeatedly warn that references to ‘common sense’ cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified.” “* * * Third, our cases repeatedly warn that references to “common sense” cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified.” *Arendi S.A.R.L. v. Apple Inc.*, __ F.3d __, 2016 WL 4205964 (Fed. Cir. 2016)(O’Malley, J.)

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What's different about the situation today versus that in *Randall v. Rea*? Now, it is no longer necessary to rely upon prior art – publications before the filing date – but only a reference which may or may not be prior art, as long as the reference was published before the filing date.

Invariably, there is a direct or indirect reference to what constitutes “prior art” versus the claimed invention. In some instances “state of the art” has been used interchangeably as a reference to the prior art to determine patentability; in other instances this term has been used to refer to the limited scope of protection a claim may have based upon prior art.

As to the former direct reference to prior art in the context of patentability, see, e.g., *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 457 (1901)(White, J., joined by Fuller, C.J., Harlan, Brewer, JJ., dissenting)(“[L]et me now recur to the state of the art *** in order to point out that even if the Jones patent embodied the process which the [majority] now attributes to it, that process was wanting in patentable novelty.”).

With the active development of a new invention, the level of skill in the art at the date the invention was made may be very low, but if the invention is published or there is a great time interval between the invention date and the filing date, the level of skill in the art will be much higher as of the filing date. Given that the Leahy Smith America Invents Act of 2011 measures nonobviousness at the *filing date* and not the *invention date* many inventions that would have been patentable based upon a lower state of the art as of the invention date are now obvious when judged as of the filing date.

E. Pre-Filing Date Evidence of the State of the Art

With the special circumstance of the *Leahy Smith America Invents Act* of 2011 we have the situation that there are now post-invention disclosures that are not “prior art” that would otherwise be patent-defeating, but such disclosures *also* may evidence the “state of the art” at a date before the filing date, bringing such disclosures into play in establishing the state of the art as of the filing date.

IV. THIRD PARTY PUBLICATION OF AN OBVIOUS VARIANT

There is no grace period explicitly stated in the statute for the inventor's disclosure of his invention and his subsequent filing of his application where in the interval a third party publishes or otherwise discloses an *obvious variant* of the disclosed invention. The literal wording of the statute does not provide a literal prior art exemption for the disclosure of such obvious variant and thus is – under the literal wording of the statute – prior art, without regard to any grace period, that defeats the inventor's subsequent filing.

It is, of course, a given that under the *Leahy Smith America Invents Act* that the *identical* disclosure of the *same invention* before the applicant's filing date by the inventor or a third party subsequent to the inventor's publication may be excused as prior art under the limited grace period .

But, as advocated by Robert A. Armitage (and adopted in PTO guidance) if there is a disclosure of *different* subject matter that is derived from the inventor, this *different* subject matter may *not* be excused under the grace period. This matter has yet to be resolved in any Federal Circuit test case.

The literal wording of the statute supports the Armitage view that the grace period does *not* apply to exempt a third party's disclosure of an *obvious variation* of the invention. The Patent Office says that a third party publication of an *obvious variant* of the claimed invention is prior art against the subsequent filing of the first inventor's patent application: *The grace period does not apply to anything other than a disclosure of the same invention*: “A disclosure *** of a claimed invention shall not be prior art to the claimed invention [as having been patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention] if *** the *subject matter disclosed* had, before such disclosure, been publicly disclosed by *** another who obtained the subject matter disclosed *** from the inventor ***.” 35 U.S.C.A. § 102(b)(1)(B)(integrating in brackets text from 35 U.S.C.A. § 102(a)(1))(emphasis added).

Quite logically, one may ask: What does the legislative history say about the “state of the art” being dated as of the filing date instead of the invention date? In terms of relevance to the current issue, there is little if anything said of relevance.

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Undoubtedly the single most comprehensive, contemporaneous record of the Congressional activities leading up to the *Leahy Smith America Invents Act* is the material of Joseph Matal, at the time an important Senate staff member who currently serves as Associate Solicitor of the U.S. Patent and Trademark Office. His contemporary recollections of the years leading up to the enactment of the *Leahy Smith America Invents Act* are collected in a two part article. Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 Federal Circuit B. J. 435 (2012); *id*, *Part II of II*, 21 Federal Circuit B. J. 539 (2012).

The Matal documentation shows no recorded thought in either the House or the Senate as to the language chosen to implement the changes to Section 103 relevant to this section. His analysis begins with a single sentence that is relevant: “The AIA amends § 103 so that a claimed invention’s obviousness is measured against the prior art that existed at the time of the invention’s effective-filing date, rather than at the time the inventor made it.” Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 Federal Circuit B. J. 435, 490 (2012)(citing *Leahy Smith America Invents Act*, Pub. L. No. 112-129, sec. 3(c), § 103, 125 Stat. 284, 287 (2011)). Insofar as the substance of the changes to Section 103 relevant to this discussion, all that Matal reports as to legislative materials is the following: “The AIA Committee Report’s section-by-section analysis simply noted that ‘§ 103 is amended consistent with moving to a first to file system. ***’” *Id.* at 491 (footnote omitted).

V. PRIOR ART THAT DOES NOT “DISCLOSE” THE INVENTION

The prior art disqualifier of the new grace period applies only to “disclosures” of the invention before the filing date. The scope of the prior art under Section 102(a)(1) includes *some* “disclosures”, e.g., where “the claimed invention was patented [or] described in a printed publication *** before the effective filing date of the claimed invention[.]”

But, there are other categories of prior art under Section 102(a)(1) that may not normally be thought of as a “disclosure”, e.g., where “the claimed invention was *** in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention[.]”

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In the context of the main definition of “prior art” under 35 U.S.C.A. §102(a)(1), an inventor is entitled to a patent “unless – the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention[.]”

Under the literal wording of new §102(a)(1), prior art includes “disclosures” of the invention, i.e., where the invention was previously “patented [or] described in a printed publication” or where acts occurred that bar a future patent applicant but which may not necessarily “disclose” the invention, i.e., where the invention was previously “in public use, on sale, or otherwise available to the public[.]”

The grace period relevant to §102(a)(1) is found in § 102(b)(1). As stated in its title, this provision exempts from prior art “Disclosures Made 1 Year or Less Before the Effective Filing Date of the Claimed Invention”. The text of § 102(b)(A) states that:

“A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under [§ 102](a)(1) if— the disclosure was made by the inventor or joint inventor or by another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor ***.”

In the interpretation of the grace period of the new law, one gets no help from the definitions section, 35 U.S.C.A. § 100, which does not touch the subject. Neither does one get help from the wording of the grace period under the law just prior to the current law which takes an entirely different approach in 35 U.S.C.A. § 102(b): “A person shall be entitled to a patent unless — the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States[.]”

A great deal was spoken on the floors of the House and Senate about the grace period over the protracted five years of consideration of legislation leading up to the final enactment in 2011. Very late in the game, the ambiguity as to the scope of the grace period became the subject of Congressional debate. Some spoke assuredly that the wording that became law provides a grace period coextensive with the patent-defeating activities of the statute, including colloquy between Senators Patrick Leahy and Orrin Hatch:

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“Mr. LEAHY: Mr. President, Congress has been working on the America Invents Act going back many years. It has gone through numerous iterations and changes have been made over time. Accordingly,

“I want to take a few minutes to discuss some important legislative history of a critical piece of this bill-section 2 of the legislation, which amends section 102 of title 35 of the United States Code. There has been a great deal of attention paid to subsections 102(a) and (b) and how those two subsections will work together. * * * One key issue on which people have asked for clarification is the interplay between patent-defeating disclosures under subsection 102(a) and the situations where those disclosures are excepted and have no patent-defeating effect under the grace period provided in subsection 102(b).

“In particular, some in the small inventor community have been concerned that a disclosure by an inventor might qualify as patent-defeating prior art under subsection 102(a) because, for example, the inventor's public disclosure and by a ‘public disclosure’ I mean one that results in the claimed invention being ‘described in a printed publication, or in public use, on sale, or otherwise available to the public’-might in some situation not be excluded as prior art under section 102(b)'s grace period. There is absolutely no situation in which this could happen given the interplay between subsections 102(a) and 102(b) as these subsections are drafted

“We intend that if an inventor's actions are such as to constitute prior art under subsection 102(a), then those actions necessarily trigger subsection 102(b)'s protections for the inventor and, what would otherwise have been section 102(a) prior art, would be excluded as prior art by the grace period provided by subsection 102(b). Indeed, as an example of this, subsection 102(b)(1)(A), as written, was deliberately couched in broader terms than subsection 102(a)(1). This means that any disclosure by the inventor whatsoever, whether or not in a form that resulted in the disclosure being available to the public, is wholly disregarded as prior art. A simple way of looking at new subsection 102(a) is that no aspect of the protections under current law for inventors who disclose their inventions before filing is in any way changed.

“Mr. HATCH: The Senator from Vermont is correct. For the purposes of grace-period protection, the legislation intends parallelism between the treatment of an inventor's actions under subsection 102(a) that might create prior art and the treatment of those actions that negate any prior-art effect under subsection 102(b). Accordingly, small inventors and others will not accidentally create a patent-

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defeating bar by their prefiling actions that would otherwise be prior art under subsection 102(a) as long as they file their patent applications within the grace period provided by subsection 102(b). But, the important point is that if an inventor's disclosure triggers the 102(a) bar with respect to an invention, which can only be done by a disclosure that is both made available to the public and enabled, then he or she has thereby also triggered the grace period under 102(b). If a disclosure resulting from the inventor's actions is not one that is enabled, or is not made available to the public, then such a disclosure would not constitute patent-defeating prior art under 102(a) in the first place.

“But even if the disclosure was enabled and available to the public so that it did qualify as prior art under subsection 102(a), subsection 102(b) would require that the disclosure be disregarded if it occurred during the 1-year grace period before the patent was sought. Indeed, a disclosure that does not satisfy the requirements to be prior art under subsection 102(a), nonetheless constitutes a disclosure that is fully protected under the more inclusive language of subsection 102(b). This relationship between these subsections will fully protect the inventor and, together with the provisions of subsection 101 limiting patenting to inventors, prevent others from obtaining a patent on the inventor's creation.

“Mr. LEAHY: I agree. One of the implications of the point we are making is that subsection 102(a) was drafted in part to do away with precedent under current law that private offers for sale or private uses or secret processes practiced in the United States that result in a product or service that is then made public may be deemed patent-defeating prior art. That will no longer be the case. In effect, the new paragraph 102(a)(1) imposes an overarching requirement for availability to the public, that is a public disclosure, which will limit paragraph 102(a)(1) prior art to subject matter meeting the public accessibility standard that is well-settled in current law, especially case law of the Federal Circuit.

“Mr. HATCH: An additional clarification we have been asked about deals **S1497* with subparagraph 102(b)(1)(B). There has been some confusion over how this provision will work. It is my understanding that this provision ensures that an inventor who has made a public disclosure—that is, a disclosure made available to the public by any means—is fully protected during the grace period. The inventor is protected not only from the inventor's own disclosure being prior art against the inventor's claimed invention, but also against the disclosures of any of the same subject matter in disclosures made by others being prior art against the inventor's claimed invention under section 102(a) or section 103—so long as the prior art

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disclosures from others came after the public disclosure by the inventor. Is that the Senators' understanding of this provision?

“Mr. LEAHY: That is correct. Subparagraph 102(b)(1)(B) is designed to work in tandem with subparagraph 102(b)(1)(A) to make a very strong grace period for inventors that have made a public disclosure before seeking a patent. Inventors who have made such disclosures are protected during the grace period, not only from their own disclosure, but also from disclosures by others that are made after their disclosure. This is an important protection we offer in our bill that will benefit independent and university inventors in particular.”

But, what Senator Leahy said in the above Congressional proceedings on March 11, 2016, was entirely at odds with what he had said *one week* earlier. At that time, *one week earlier*, he had stated that “the first-inventor-to-file provisions that are included in the America Invents Act were drafted with careful attention to needs of universities and small inventors. That is why the bill includes a 1-year grace period to ensure that an inventor's own publication or disclosure cannot be used against him as prior art, but will act as prior art against another patent application. This will encourage early disclosure of new inventions, regardless of whether the inventor ends up trying to patent the invention.” *Patent Reform Act of 2011*, 157 Cong. Rec. S1089-01, 2011 (March 2, 2011)(Remarks of Senator Leahy)

Also of interest are the remarks of Representative Zoe Lofgren:

“As we move into the first-to-file system as is proposed in this bill, it is absolutely essential that the revised grace period extend to everything that is prior art under today's rules. Unfortunately, that is not the case in the manager's amendment. The grace period would protect, and this is a direct quote, ‘only disclosures.’ Well, what would that not protect? Trade secrets. Offers for sale that are not public. You could have entrepreneurs who start an invention and start a small business who won't be able to get a patent for their invention under the grace period, and entrepreneurs might then be forced to delay bringing their products to market, which would slow growth. This needs to be addressed, not in a colloquy but in language, and we agreed in the committee when we stripped out language that didn't fix this that we would fix the 102(a) and (b) problem in legislation. There was a colloquy on the Senate floor similar to one that has just taken place, but we know that the language of the bill needs to reflect the intent. Judges look to

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the statute first and foremost to determine its meaning, and the legislative history is not always included.

“So the ambiguity that's in the measure is troublesome. And although we prepared an amendment to delineate it, it has not been put in order, and, therefore, this remedy cannot be brought forth, and small inventors and even big ones may have a problem.

* * *

“*** I think it's very important that the manager's amendment be defeated. I would hope that if that happens, that we might have a chance to step back and to fully examine where we are in terms of the prior user rights and the grace period because, as the patent commissioner had said, this is the gold standard, the United States has had the gold standard in patents with this grace period. It would be a shame not just for the Congress but for our country and our future as innovators to lose this genius part of our patent system.” *America Invents Act*, 157 Cong. Rec. H4420-06 (June 22, 2011)(Remarks of Rep. Lofgren).

VI. “STATE OF THE ART” TO ESTABLISH PROTECTION SCOPE

It is important to distinguish the use of the state of the art to establish (or deny) patentability under Section 103 from the use of the state of the art to establish the scope of claims for infringement purposes.

Supreme Court precedent referring to the state of the art to determine the scope of protection dates back to *Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1863), where the Court “refer[red] to these previous inventions *** to show the state of the art, in order to properly appreciate the nature and extent of the invention of Wells.” *See also Railroad Company v. Dubois*, 12 Wall. (79 U.S.) 47, 65 (1870)(scope of infringement); *Washing-Machine Co. v. Tool Co.*, 20 Wall. (87 U.S.) 342, 350 (1873); *Cohn v. United States Corset Company*, 93 U.S. 366, 373 (1876); *Thompson v. Boisselier*, 114 U.S. 1, 14 (1885); *Pope Manuf'g Co. v. Gormully & Jeffery Manuf'g Co.*, 144 U.S. 238, 242 (1892); *Zane v. Soffe*, 110 U.S. 200, 204 (1884); *Washburn & Moen Manuf'g Co v. Beat'Em All Barbed-Wire Co.*, 143 U.S. 275, 281(1892); *Aron v. Manhattan Ry. Co.*, 132 U.S. 84, 90 (1889); *Butler v. Steckel*, 137 U.S. 21, 29 (1890); *Electric Gas-Lighting Co. v. Boston Electric Co.*, 139 U.S. 481, 492 (1891); *Computing Scale Co. of America v. Automatic Scale Co.*, 204 U.S. 609, 616 (1907); *Westinghouse Electric & Mfg. Co. v. Formica Insulation Co.*, 266 U.S. 342, 350 (1924).

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Modern precedent includes *Hilton Davis Chemical Co. v. Warner-Jenkinson Co., Inc.*, 62 F.3d 1512, 1573 (Fed. Cir. 1995)(en banc), *subsequent proceedings*, *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997)(quoting *Computing Scale Co. v. Automatic Scale Co.*, 204 U.S. 609, 617 (1907), quoting *Hubbell v. United States*, 179 U.S. 77, 80 (1900))("[I]t is well settled that the claim as allowed must be read and interpreted with reference to *** the prior state of the art ***."); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1332 (Fed. Cir. 2005)(en banc)(Mayer, J., joined by Newman, J., dissenting)(claim construction); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed.Cir.1998); *Novo Nordisk A/S v. Caraco Pharm. Labs., Ltd.*, 719 F.3d 1346, 1354 (Fed. Cir. 2013)(patentability determination); *Railroad Company v. Dubois*, 12 Wall. (79 U.S.) 47, 65 (1870)(scope of infringement); *Cohn v. United States Corset Company*, 93 U.S. 366, 373 (1876); *Thompson v. Boisselier*, 114 U.S. 1, 14 (1885); *Pope Manuf'g Co. v. Gormully & Jeffery Manuf'g Co.*, 144 U.S. 238, 242 (1892); *Computing Scale Co. of America v. Automatic Scale Co.*, 204 U.S. 609, 616 (1907); *Westinghouse Electric & Mfg. Co. v. Formica Insulation Co.*, 266 U.S. 342, 350 (1924); *Miller v. Eagle Manufacturing Co.*, 151 U.S. 186, 208 (1894).

VII. BROKEN MODEL OF PRE-FILING DISCLOSURES

There is a common misconception that an inventor may safely rely upon the one year grace period to seek licensees or assignees for an invention during that period. This pre-filing activity would often involve disclosures of the invention, perhaps at conferences of experts where theories may be discussed which explain how the invention was developed. Or, an embodiment of the invention made in the researchers laboratory may be discussed.

To permit continuation of this practice, the major research universities fought long and hard to retain a full one year grace period. They were *apparently* successful in doing so, because of the statutory exclusion of "prior art" of an inventor's own making in the one year period prior to filing the patent application was excluded in the new grace period of Section 102 of the *The Leahy Smith America Invents Act* of 2011.

The new law does accommodate the academic research community – to a point. Thus, prior to the new law, a traditional pattern for patenting university-generated research generally involved the following sequence of events:

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First, a professor would make a discovery of certain phenomena which would become a part of the state of the art.

Second, the professor would make a concrete embodiment based on that discovery, and then *publish* that concrete embodiment.

Third, based upon the publicity from such publication and other efforts to publicize the invention to likely licensees, *then* the patent application would be licensed *and then* the patent application would be drafted and filed.

It was important to the university community to retain the one year grace period to permit continuation of this practice, which ended in apparent success: “The AIA maintains th[e] one-year grace period for U.S. patent applicants because it gives U.S. patent applicants sufficient time to prepare and file their applications.” Jay M. Mattappally, *Goliath Beats David: Undoing the Leahy-Smith America Invents Act's Harmful Effects On Small Businesses*, 58 Loy. L. Rev. 981, 1003 (2012)(quoting Wendy H. Schacht & John R. Thomas, *The Leahy-Smith America Invents Act: Innovation Issues*, at 5, Congressional Research Serv. (Jan. 24, 2012), <http://www.ieeeusa.org/policy/eyeonwashington/2012/documents/innovationissuesAIA.pdf>); Sean B. Seymore, *Patent Asymmetries*, 49 U.C. Davis L. Rev. 963, 1013, n.342 (2016)(quoting Wendy Schacht & John R. Thomas, *Patent Reform: Innovation Issues*, in *PAT. TECH.* 1, 11 (Juanita M. Branes ed., 2007)) (““A race to the PTO would encourage premature and sketchy technological disclosures in hastily-filed patent applications.””).

The focus of the grace period, however, was on the definition of novelty under 35 USC § 102 and the grace period exceptions to novelty under that same section.

It was apparently thought that there was no need to deal with a grace period relative to the “state of the art” because the law *at the time* considered the state of the art in Section 103 only as of the *invention date*. (This may have been the reason why the new legislation to amend Section 103 was overlooked: That amendment moves the time element of the state of the art from the *invention date* of the prior law time-forward to the *filing date*. So, the scientific explanations of the inventor between his invention date and filing date are now suddenly part of the state of the art for purposes of the evaluation of the invention for nonobviousness.)

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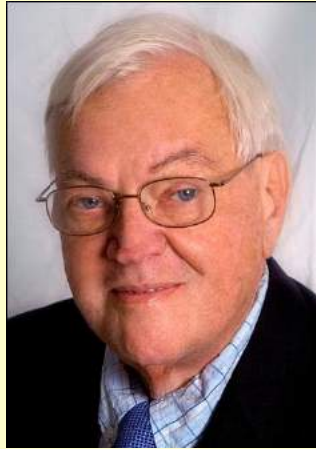
Thus, what the proponents of the legislation overlooked in the universities' academic patent filing model is that by the time of the *filing date* of the patent application, thanks to the early publication relevant to the invention, the state of the art as of the new date – the effectively filing date – had *already* shot up, sky high. What had been clearly nonobvious the day before – such early publication when the state of the art was low was, as of the day of publication, remarkably higher to the point that the invention may now be obvious when judged as of the state of the art on the filing date:

Under the new law of Section 103 nonobviousness is measured as to whether “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious *before the effective filing date* of the claimed invention[.]”

VIII. CONCLUSION

Filing promptly best ensures the lowest possible level of skill in the art: An invention patentable when made can easily become unpatentable if the application is filed at a point in time with a higher level of state of the art.

About the Author



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