

PRECEDENTIAL OPINION

Pursuant to Board of Patent Appeals and Interferences Standard Operating Procedure 2, the opinion below has been designated a precedential opinion.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKAKO YAMAGUCHI *ex rel.*
KATSUMI YAMAGUCHI, and
TOMOHIRO OKAZAKI

Appeal 2007-4412
Application 10/862,079¹
Technology Center 2800

Decided: August 29, 2008

Before MICHAEL R. FLEMING, *Chief Administrative Patent Judge*,
KENNETH W. HAIRSTON, RICHARD TORCZON, JOHN A. JEFFERY,
and KARL D. EASTHOM, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

Opinion concurring filed by Administrative Patent Judge TORCZON.

DECISION ON APPEAL

¹ This application is a divisional application of Application Serial Number 10/087,556, filed March 1, 2002, now abandoned. Although an appeal was decided in the parent '556 application (Appeal No. 2006-1836), the issues in that appeal are not germane to the issues before us in the present appeal.

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 7-23. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants invented a method for forming bumps on a semiconductor device for use in a flip-chip technique. To this end, a conductive bump is formed on a contact pad such that the bump comprises two coaxially-aligned bodies with different cross-sectional dimensions. Specifically, the first body contacts the contact pad, and the second body is formed on the first body with a smaller cross-sectional dimension than the first body. Such a technique, among other things, produces more uniform bumps, facilitates probing tests after bump formation, and reinforces the physical strength of the bump.² Claim 9 is illustrative:

9. A method of making a semiconductor device, comprising the steps of:

providing a contact pad on a semiconductor substrate;

providing a conductive bump on said contact pad by:

forming a first body on said contact pad; and

then forming a coaxially-aligned second body on said first body having different cross-sectional dimensions, said second body having a smaller cross-sectional dimension than said first body.

The Examiner relies on the following prior art references to show unpatentability:

² See generally Spec. ¶¶ 0005-13; Abstract.

Endo	US 5,057,453	Oct. 15, 1991
Narayanan	US 6,596,618 B1	Jul. 22, 2003 (filed Dec. 7, 2001) ³

1. Claims 9-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Narayanan (Ans. 4).
2. Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Endo and Narayanan (Ans. 4-6).

The Anticipation Rejection

Regarding the anticipation rejection of representative independent claim 9,⁴ Appellants argue that Narayanan is not a proper reference since the effective filing date of the present application is prior to Narayanan's filing date of December 7, 2001. Appellants acknowledge Narayanan's underlying provisional application—a provisional application whose filing date antedates the earliest effective filing date of the present application. Nevertheless, Appellants take the position that since the Examiner failed to (1) furnish a copy of the provisional application, and (2) show how the provisional application properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. § 112, first paragraph, Narayanan is not an available reference. Therefore, Appellants argue, the rejection based on Narayanan is improper (App. Br. 4; Reply Br. 1-2).

³ This patent claims the benefit under § 119(e) of Provisional Application 60/254,437, filed December 8, 2000.

⁴ Appellants argue claims 9-23 together as a group. *See* App. Br. 4. Accordingly, we select claim 9 as representative. *See* 37 C.F.R. § 41.37(c)(1)(vii).

The Examiner indicates that Appellants failed to show any inconsistencies between the subject matter relied upon to make the rejections and the provisional application. In any event, the Examiner asserts that the Narayanan patent and its underlying provisional application “clearly show the same subject matter” applied in the rejections (Ans. 7).

In response, although Appellants admit that they obtained a copy of Narayanan’s underlying provisional application,⁵ Appellants nonetheless assert that “a cursory review of the provisional application...immediately indicate[s] that *it does not identically track* the Narayanan et al. patent” (Reply Br. 2; emphasis added).

The Obviousness Rejection

Representative independent claim 7⁶ calls for a method for forming a conductive bump on a semiconductor device reciting, in pertinent part, (1) forming a first plated film made of a conductive metal with a second resist film thereon; (2) forming a second plated film in an opening formed in the second resist film located above the center of the first plated film; and (3) removing the resist films. Regarding the Examiner’s obviousness rejection of this claim, Appellants reiterate their arguments pertaining to the alleged nonavailability of the Narayanan reference. Appellants add that

⁵ Specifically, Appellants “acknowledge[] that a copy [of Narayanan’s underlying provisional application] was obtained after receipt of the Examiner’s Answer wherein the examiner advised that the application could be obtained from PAIR [the Patent Application Retrieval System of the United States Patent and Trademark Office (USPTO)]” (Reply Br. 2).

⁶ Appellants argue claims 7 and 8 together as a group. *See* App. Br. 4-5; *see also* Reply Br. 2-3. Accordingly, we select claim 7 as representative. *See* 37 C.F.R. § 41.37(c)(1)(vii).

there is no teaching or suggestion in Endo to provide the additional conductive film but for the prior knowledge of the present disclosure (App. Br. 4-5; Reply Br. 2-3).

The Examiner, however, emphasizes that Narayanan was relied upon to show adding an extra mask and conductive material. According to the Examiner, Narayanan provides ample motivation to combine its teachings with Endo to arrive at the claimed invention (Ans. 8).

ISSUES

Since the Narayanan patent is relied upon for both the anticipation and obviousness rejections, its qualification as prior art is therefore necessary to this appeal. Accordingly, the pivotal issue before us is whether Appellants have shown that the Examiner erred in relying on Narayanan as prior art under § 102(e). This issue turns on whether the critical reference date of Narayanan is the filing date of its underlying provisional application.

In this regard, our resolution of the pivotal date issue will also be dispositive of whether error has been shown regarding the anticipation rejection of representative claim 9. We note that Appellants have not disputed the Examiner's factual findings relied upon in the disclosure of the Narayanan patent apart from disputing its qualification as prior art.

If Narayanan qualifies as prior art, we then address the second issue that pertains to the obviousness rejection, namely whether Appellants have shown that the Examiner erred in combining the teachings of Narayanan with Endo to arrive at the invention recited in representative claim 7.

FINDINGS OF FACT

1. As noted *infra*, the Examiner's factual findings regarding the specific teachings of the Narayanan and Endo patents (Ans. 4-6) are undisputed.

2. As a divisional application, the effective filing date of the present application is the filing date of its parent application, March 1, 2002.

3. This application claims benefit of foreign priority under 35 U.S.C. § 119(d) based on Japanese Patent Application No. 2001-061381 filed March 6, 2001.

4. The Examiner has not challenged Appellants' entitlement to its priority date.

5. The cited reference to Narayanan was filed on December 7, 2001—a date prior to the effective filing date of the present application, but after its putative foreign priority date.

6. Narayanan claims benefit under 35 U.S.C. § 119(e) to Provisional Application No. 60/254,437, filed December 8, 2000 (“the provisional application”)—a date before the present application's putative foreign priority date.

7. Figures 2, 3, and 7 of Narayanan correspond to Figures 2, 3, and 7 of the provisional application.

8. The discussion associated with Figures 2, 3, and 7 in Narayanan (col. 4, ll. 5-28; col. 4, l. 53 - col. 5, l. 11) is substantially the same as the corresponding discussion of this subject matter in the provisional application (3:22-4:3; 4:15-28).

9. Figures 8 through 10 of the Narayanan patent and its corresponding discussion (Narayanan, col. 5, l. 12 - col. 6, l. 18) do not appear in Narayanan's provisional application.

10. Narayanan teaches depositing a second layer of solder structure on solder bump precursor structures formed by a first layer of solder structure to increase the solder-bump volume, which results in solder bumps with increased height (Narayanan, Abstract; Provisional Appl'n, Abstract).

11. Narayanan discloses that it is known in the semiconductor packaging industry that the fatigue reliability of the solder joints in flip-chip bonding applications can be improved by increasing the height of the solder joints thereby reducing the strain observed at the solder joints (Narayanan, col. 2, ll. 6-10; Provisional Appl'n 2:5-7).

ANALYSIS

THE ANTICIPATION REJECTION

1. The Examiner's Reliance on Narayanan's Provisional Application To Establish the Critical Reference Date Under § 102(e) Fully Comports With the Plain Meaning of the Statute.

Since the anticipation issue in this appeal turns on whether Narayanan qualifies as prior art under § 102(e), we begin with the statute itself. Section 102(e)(2) states, in pertinent part, that “[a] person shall be entitled to a patent unless...the invention was described in...a patent granted on an *application for patent* by another filed in the United States before the invention by the applicant for patent....” 35 U.S.C. 102(e)(2) (2002) (emphasis added).⁷

⁷ 35 U.S.C. § 102(e) states in full:

The two types of applications for patent that are relevant to this appeal are established by statute. First, § 111(a) provides for a standard written application that requires a specification, drawing, and oath, and that must be accompanied by the requisite fee. 35 U.S.C. § 111(a) (2002). Second, § 111(b) provides for a provisional application that must contain a specification and a drawing, the application also accompanied by the requisite fee. 35 U.S.C. § 111(b) (2002). However, claims are not required in provisional applications. 35 U.S.C. § 111(b) (2002).

Although § 102(e)(2) does not specify the type of “application for patent” on which the U.S. patent is granted, § 111(b) nevertheless indicates the following:

(8) Applicable provisions.--The provisions of this title relating to *applications for patent* shall apply to *provisional applications for patent*, except as otherwise provided, and except that provisional applications for patent shall not be subject to sections 115, 131, 135, and 157 of this title.

A person shall be entitled to a patent unless--

* * *

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language[.]

35 U.S.C. § 102(e) (2002).

35 U.S.C. § 111(b)(8) (2002) (emphasis added).

Based on this express intent to apply the provisions of Title 35 relating to “applications for patent” to provisional applications (except for four enumerated sections noted in § 111(b)(8)), a provisional application can therefore be reasonably considered an “application for patent” within the meaning of § 102(e). The plain meaning of these provisions of Title 35 as noted above is outlined in MPEP 2136.03(III) for establishing the critical reference date under § 102(e) of a U.S. patent or U.S. application publication that is entitled to the benefit of the filing date of a provisional application under § 119(e). Based on the statutory scheme of Title 35, we hold that Appellants have not shown harmful error in the rejections on appeal.

2. *In Light of this Statutory Framework, the “Secret Prior Art” Rationale of In re Wertheim is Now Generally Inapplicable to U.S. Patents and Published Applications Relying on Provisional Applications.*

The statutory requirement of Title 35 to publish 18 months after filing date, effective in 2000, displaces in most cases applying the “secret prior art” rationale of *In re Wertheim*, 646 F.2d 527 (CCPA 1981). In *Wertheim*, a patent cited by the Examiner under § 102(e) was the last of a series of four continuing applications. Significantly, some of these applications included continuation-in-part (CIP) applications that added new matter to the original disclosure.⁸ The court emphasized that if the type of new matter added was

⁸ The *Wertheim* court notes the following regarding the application chain associated with the cited patent to Pfluger (“the Pfluger patent”):

Pfluger IV was designated a continuation of Pfluger III, which was designated a continuation-

“critical to the patentability of the claimed invention, a patent could not have issued on the earlier filed application and the theory of Patent Office delay has no application.” *Id.* at 536 (emphasis added).

In this regard, the *Wertheim* court emphasized the following:

[The USPTO] must demonstrate that the earlier-filed application contains §§ 120/112 support for the invention *claimed* in the reference patent. *For if a patent could not theoretically have issued the day the application was filed, it is not entitled to be used against another as “secret prior art,”* the rationale of *Milburn* being inapplicable....

Id. at 537 (emphasis added).

The *Wertheim* court ultimately found the patent cited by the Examiner was not entitled to the filing date of its parent application since two claim limitations recited in the cited patent “were neither expressly nor inherently part of the original Pfluger disclosure.” *Id.* at 538. As such, without the benefit of the parent application’s filing date, that part of the cited patent’s

in-part (CIP) of Pfluger II, which was designated a CIP of Pfluger I.

Pfluger I did not support all of the limitations of the claims copied from the Pfluger patent. Specifically, it did not disclose concentrating the extract to a solids content of between 35% and 60% prior to foaming. Express disclosure of this limitation did not occur until Pfluger III. It also did not expressly disclose always creating the foamed extract at at least atmospheric pressure, a limitation first found in Pfluger II.

Wertheim, 646 F.2d at 529.

disclosure relied upon by the Examiner “cannot be said to have been incipient public knowledge as of that date ‘but for’ the delays of the Patent and Trademark Office, under the Milburn rationale.” *Id.*

Thus, the *Wertheim* court’s “but-for” test was intended to reconcile that court’s concern regarding “secret prior art” with the U.S. Supreme Court’s holding in *Alexander Milburn Co. v. Davis-Bournonville Co.*, 270 U.S. 390 (1926)—a holding that was later codified into what is now § 102(e).⁹ In *Milburn*, the plaintiff alleged infringement of its patent which subject matter was alleged to have been invented by Whitford. The defense, however, argued that Whitford was not the first inventor of the patented invention, but rather Clifford was the first inventor. *Id.* at 390. Significantly, although the issue date of Clifford’s patent was *after* Whitford’s application filing date, Clifford’s filing date was *before* Whitford’s filing date. *Id.*

The Court held that Whitford was not the first inventor in view of Clifford’s disclosure. In reaching this decision, the Court noted that “Clifford had done all that he could to make his description public. He had taken steps that would make it public as soon as the Patent Office did its work, although, of course, amendments might be required of him before the end could be reached.” *Id.* at 401.

This rationale forms the basis for § 102(e), and is based on the notion that by filing a patent application with the USPTO, applicants have done all they can do to publicize their invention disclosure. Therefore, assuming a patentable invention is claimed in such an application, the inherent administrative delays in the patent process should not penalize the applicant,

⁹ *In re Klesper*, 397 F.2d 882, 885 (CCPA 1968).

at least with respect to the date of invention. As such, the applicant's U.S. filing date is the date of invention irrespective of when the patent actually issues.

The question of whether *Wertheim*'s but-for test comports with *Milburn* is certainly debatable in light of the points made by the concurrence. Apart from the narrow fact pattern addressed in *Wertheim*, *Wertheim*'s "secret prior art" rationale is inapplicable to determining whether the critical reference date of a U.S. patent or U.S. application publication is the filing date of its underlying provisional application under the statutory scheme of Title 35 as it exists today.

First, *Wertheim* was decided in 1981—well before the statutory framework implementing publication of U.S. patent applications 18 months after filing under 35 U.S.C. § 122(b) and the establishment of provisional applications under § 111(b).¹⁰ Second, while provisional applications are not themselves published under 35 U.S.C. § 122(b)(2)(A)(iii), the corresponding regular utility application that claims priority to a provisional application under § 119(e) is generally published (with certain exceptions)¹¹ after 18 months. Upon such publication, not only is the regular utility application laid open to the public, but its corresponding provisional

¹⁰ See MPEP § 201.04(b) (noting that the Uruguay Round Agreements Act (effective as of June 8, 1995) established a domestic priority system that enables domestic applicants to quickly and inexpensively file provisional applications); see also MPEP § 1120 ("With certain exceptions, nonprovisional utility and plant applications for patent filed on or after November 29, 2000 are published promptly after the expiration of a period of eighteen months from the earliest filing date for which a benefit is sought....").

¹¹ See 35 U.S.C. §§ 122(b)(2)(A)(i)-(iv) (2002) (listing exceptions); see also 37 C.F.R. § 1.211(a)-(d) (same).

application is likewise made available to the public. *See* 37 C.F.R. § 1.14(a)(1)(iv)-(vi).

While the filing of a provisional application *itself* does not trigger the publication of that application, the conversion from a provisional to an application under § 111(b)(5) does cause the application to be available to the public after 18 months in most instances. Also, since § 111(b)(5) allows for conversion of a provisional application to a non-provisional application, provisional applications can become U.S. Patents. Moreover, the filing of the provisional application's corresponding regular utility application will, in most instances, cause both applications to be available to the public 18 months after the provisional application filing date. *See* 37 C.F.R. § 1.211(a); *see also* 37 C.F.R. § 1.14 (a)(1)(iv).

The fact that provisional applications require an additional step for publication does not, in our view, render them any less applicable to the legal fiction of *Milburn* underpinning § 102(e). According to the *Wertheim* court, *Milburn* is premised on the notion that an application with a patentable claimed invention can theoretically issue the same day it is filed. *Wertheim*, 646 F.2d at 537. Even assuming, without deciding, that this legal fiction is still viable, we see no reason why it could not apply to provisional applications where the disclosure otherwise supports the claimed invention under § 112, first paragraph. That is, if a patent can theoretically issue the same day a non-provisional application is filed under this fiction, we see no reason why such a patent could not likewise theoretically issue the same day that a provisional application was filed. The applicant for a non-provisional application may still have to amend the claims and/or disclosure, and must

pay the issue fee,¹² to obtain a published patent in this situation irrespective of whether a provisional application was filed or not. Thus, applicants must affirmatively act under this fiction to cause the application to issue on the same day of filing for both non-provisional and provisional applications.

Similarly, as we indicated *supra*, merely filing a provisional application, without more, does not automatically result in publication of the invention disclosure, but rather also requires an additional intervening step on the part of the applicant (i.e., timely request for conversion under § 111(b)(5)) or filing a corresponding regular utility application under § 111(a)). But filing a provisional application in the USPTO that meets the statutory requirements, in effect, provides a self-authenticating¹³ instrument establishing a date of disclosure for the subject matter contained within the instrument. As a constructive reduction to practice,¹⁴ this authenticated disclosure serves as prima facie evidence that the applicant was in

¹² “Upon payment of this sum the patent shall issue, but if payment is not timely made, the application shall be regarded as abandoned.” 35 U.S.C. § 151.

¹³ The term “authentication” is defined as follows: “In the law of evidence, the act or mode of giving authority or legal authenticity to a statute, record, or other written instrument, or a certified copy thereof, so as to render it legally admissible in evidence.” Black’s Law Dictionary 89 (6th ed. 1991).

¹⁴ See Charles E. Van Horn, *Practicalities and Potential Pitfalls When Using Provisional Patent Applications*, 22 AIPLA Q.J. 259, 299 (1994) (“The filing of a provisional application will establish, as of the filing date, a constructive reduction to practice of the invention described in the application.”); see also Robert A. Migliorini, *Twelve Years Later: Provisional Patent Application Filing Revisited*, 89 J. Pat. & Trademark Off. Soc’y 437, 443 (2007) (“The filing of a provisional application also serves as evidence of constructive reduction to practice of the invention and hence a date of invention”).

possession of the subject matter disclosed in the provisional application when it was filed.

While the public is not yet notified of this disclosure when it is authenticated, the authenticated disclosure will be publicized when the applicant converts the provisional application to a utility application under § 111(b)(5) or files a corresponding § 111(a) utility application (i.e., via a published application under § 122(b) or as a granted U.S. patent). That is, either publication event will publicize the authenticated disclosure of the underlying provisional application. Like a regular utility application, the provisional application is considered prior art for all that it teaches.

As the concurrence points out, under a strict application of *Wertheim*'s but-for test, a provisional application could arguably “never be used for a filing date under § 102(e) because a provisional application cannot issue as a patent (or be a published application) without some additional action by the applicant.” Concurring op., at 25. But even assuming that *Wertheim*'s but-for test remains viable for the narrow class of unpublished applications analogous to those at issue in that case, applying *Wertheim* to all other applications requires a strained reading of the statute and precedent to address a misplaced concern about secret prior art—a concern that simply no longer applies to these publicly-available applications.

First, as we noted above, the statutory scheme of Title 35 indicates that Congress intended for “applications for patent” under § 102(e) to apply to both regular utility applications and provisional applications, particularly when considering §§ 111(b) and 102(e) together. Second, since a provisional application effectively constitutes an authenticated disclosure of

the claimed invention that is ultimately published, relying on the subject matter of such a disclosure as prior art is consistent with the underlying policy of the patent system generally. That is, in exchange for the disclosure of new, useful, and nonobvious inventions and the benefits to the public resulting from that disclosure, the inventor is granted exclusive patent rights for a limited period. *See Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989). Applicants' disclosure obligations stemming from this bargain are readily achieved via published provisional applications. Like published utility applications and granted patents, the public disclosure of provisional applications promotes the progress of the useful arts and, as an authenticated disclosure, constitutes prior art for all that it teaches.

We acknowledge that the primary function of provisional applications is to claim the benefit of domestic priority under § 119(e), which in that sense is a "patent saving" provision similar to other priority provisions under § 119. *See In re Hilmer*, 359 F.2d 859, 877 (CCPA 1966) ("*Hilmer I*"). We also recognize that, unlike § 119, § 102(e) is a "patent defeating" provision. *Id.* Indeed, the *Hilmer I* court noted these distinctions, as well as the nature of U.S. patent applications which, at that time, were held in secrecy until the patent issued. In light of these factors, the *Hilmer I* court declined to extend the *Milburn* rule, codified in § 102(e), by the full one-year priority period of § 119 for foreign applications. *Id.* at 877.

Like *Wertheim*, *Hilmer I* was decided well before the current practice of publishing U.S. patent applications 18 months after filing under § 122(b) and the establishment of provisional applications under § 111(b). As such, the *Hilmer I* court's reluctance to extend the *Milburn* doctrine to § 119

priority documents is clearly limited to *foreign* priority claims—not *domestic* priority (i.e., U.S. provisional applications).¹⁵

In sum, the statutory scheme of Title 35 indicates that Congress intended for “applications for patent” under § 102(e) to apply to both regular utility applications and provisional applications, particularly when considering §§ 111(b) and 102(e) together. As a published “application for patent” under this statutory framework, a provisional application—like a regular utility application—constitutes prior art for all that it teaches and, as such, promotes the progress of the useful arts.

With these legal principles in mind, we turn to the pivotal issue before us in the present appeal. As a divisional application, the effective filing date of the present application is the filing date of its parent application, March 1, 2002. *See* 35 U.S.C. § 121. This application, however, claims benefit of foreign priority under § 119(d) based on a Japanese application filed March 6, 2001.¹⁶

The cited reference to Narayanan was filed on December 7, 2001—a date prior to the effective filing date of the present application, but after its foreign priority date. But Narayanan claims benefit under § 119(e) to a

¹⁵ Compare 35 U.S.C. § 119(d) (foreign priority) with § 119(e) (domestic priority).

¹⁶ Technically, Appellants have not perfected their foreign priority date under § 119(d) since the foreign priority document is not in the English language, nor is there an English language translation of this document in the record before us, either in the present application or its parent application. *See* 37 C.F.R. § 1.55(a)(4)(i)(B); *see also* MPEP § 201.15. Nevertheless, for purposes of this decision, we presume that Appellants are capable of perfecting their foreign priority claim under § 119(d).

provisional application filed December 8, 2000—a date before the present application’s foreign priority date.

In the anticipation rejection, the Examiner’s factual findings pertaining to Narayanan relied principally on Figures 2, 3, and 7 of the reference (Ans. 4). Furthermore, in response to Appellants’ challenge (App. Br. 4) that no showing was made as to whether the provisional application properly supported the subject matter relied upon to make the rejection in compliance with § 112, first paragraph, the Examiner found that the provisional application “*clearly shows the same subject matter* as applied from the Narayanan et al. patent in the art rejections of the present application” (Ans. 7; emphasis added). The Examiner also noted that the provisional application was readily available in the PAIR system (*Id.*)

Although the Examiner’s statement regarding the correspondence between the Narayanan patent and its underlying provisional application is somewhat terse and conclusory, the Examiner nonetheless found that both documents “clearly show the same subject matter”—a factual finding. By making this factual finding, the Examiner then shifted the burden to Appellants to show why such a factual finding was erroneous.

In response to this factual finding, Appellants contend that the Examiner failed to furnish a copy of Narayanan’s provisional application as required under MPEP § 707.05(a) since it falls under the category of “non-patent literature” as described in that section (Reply Br. 1-2). This argument, however, is unavailing for two reasons.

First, even if we assume that the Examiner was required to provide a copy of Narayanan’s underlying provisional application (which he is not), such an alleged procedural deficiency on the part of the Examiner would be

a petitionable matter—not an appealable matter.¹⁷ Second, where, as here, the provisional application is available in Public PAIR, enhancements to Public PAIR have obviated the need to supply copies of provisional applications relied upon to give prior art effect under § 102(e) to references applied in rejections. *See Most Publicly Available Provisional Applications Can Now be Viewed Over the Internet*, 1288 Off. Gaz. Pat. Office 169 (Nov. 23, 2004).

Nevertheless, Appellants admit that they obtained a copy of Narayanan’s corresponding provisional application, but contend that “it does not identically track” the Narayanan patent (Reply Br. 2). While this may be true, such a mere conclusory statement totally devoid of explanation or analysis hardly persuades us of error in the Examiner’s factual findings pertaining to the Narayanan patent and its provisional application.

While there are differences between the Narayanan patent and its corresponding provisional application, the differences are simply not germane to the facts relied upon by the Examiner in the rejection. Specifically, Figures 8 through 10 of the Narayanan patent and its corresponding discussion (Narayanan, col. 5, l. 12 - col. 6, l. 18) do not appear in Narayanan’s provisional application.

But the Examiner did not rely on that portion of the Narayanan patent in the rejection. Rather, the Examiner relied on Figures 2, 3, and 7 of the reference (Ans. 4). These figures clearly correspond to Figures 2, 3, and 7 of the provisional application, albeit depicted as informal drawings in the

¹⁷ *See* MPEP § 706.01 (“[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board.”); *see also* MPEP § 1201 (“The Board will not ordinarily hear a question that should be decided by the Director on petition....”).

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provisional application as compared to the patent's formal drawings. Furthermore, the corresponding discussion of these figures in the patent is commensurate with that found in the provisional application. For clarity, the relevant factual correspondence between the Narayanan patent and its provisional application is summarized below:

Facts	Narayanan Patent	Narayanan Provisional Application
Facts found by the Examiner in lines 1-8 of the anticipation rejection (Ans. 4)	Fig. 2 (corresponding description on col. 4, ll. 5-25)	Fig. 2 (corresponding description on 3:22-35)
Facts found by the Examiner in lines 8 and 9 of the anticipation rejection (Ans. 4)	Fig. 3 (corresponding description on col. 4, ll. 25-28)	Fig. 3 (corresponding description on 3:35-4:3)
Facts found by the Examiner in lines 9-15 of the anticipation rejection (Ans. 4)	Fig. 7 (corresponding description on col. 4, l. 53 - col. 5, l. 11)	Fig. 7 (corresponding description on 4:15-28)

Table 1: Summary of Relevant Factual Correspondence Between Narayanan Patent and Provisional Application

Based on these similarities, Appellants have not persuaded us of error in the Examiner’s factual findings based on the Narayanan patent and its provisional application. Therefore, Appellants have not shown that the Examiner erred in relying on Narayanan as prior art under § 102(e).

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner’s anticipation rejection of representative claim 9. Accordingly, we will sustain the Examiner’s rejection of that claim, and claims 10-23 which fall with claim 9.

The Obviousness Rejection

Since Appellants have not shown error in the Examiner's reliance on Narayanan as prior art as noted *supra*, we now address the second issue before us pertaining to the obviousness rejection, namely whether Appellants have shown that the Examiner erred in combining the teachings of Narayanan with Endo to arrive at the invention recited in representative claim 7.

We first note that Appellants do not dispute the Examiner's factual findings regarding the Endo reference (Ans. 5-6). We therefore adopt these undisputed factual findings as our own.

Rather, Appellants argue that there is no teaching or suggestion *in Endo* to provide the additional conductive film but for the prior knowledge of the present disclosure (App. Br. 5; Reply Br. 3; emphasis added). The Examiner, however, did not rely on Endo for such a teaching. Rather, as the Examiner indicates, it was *Narayanan* that was relied upon for such a teaching, namely the additional mask and conductive material shown in Figure 7 (Ans. 8).

As we indicated in Table 1, *supra*, the subject matter of Figure 7 of Narayanan is amply supported by its corresponding provisional application. Appellants have simply not shown that the Examiner erred in combining this teaching with that of Endo to arrive at the claimed invention.

First, the Examiner's stated reason to combine Narayanan with Endo, namely to increase the solder-bump volume (Ans. 6), stems from the Narayanan reference itself (e.g., the Abstract). This teaching is amply supported in the Abstract of Narayanan's provisional application. Secondly, the Examiner's findings pertaining to the extra conductive material

increasing the bumps' height and reducing strain in column 2, lines 6-10 of Narayanan (Ans. 8) are likewise amply supported in the corresponding provisional application (Narayanan Provisional Appl'n 2:5-7).

This combination, in our view, is amply supported by the collective teachings of the prior art references, and clearly evidences "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness...." *See KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740 (2007). We therefore find no error in this approach.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's obviousness rejection of representative claim 7. Therefore, we will sustain the Examiner's rejection of that claim, and claim 8 which falls with claim 7.

CONCLUSIONS OF LAW

Appellants have not shown that the Examiner erred in relying on Narayanan as prior art under § 102(e), and therefore have not shown error in the Examiner's anticipation rejection of representative claim 9 based on that reference. Nor have Appellants shown error in the Examiner's obviousness rejection of representative claim 7 based on the collective teachings of Narayanan and Endo.

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DECISION

We have sustained the Examiner's rejections with respect to all claims on appeal. Therefore, the Examiner's decision rejecting claims 7-23 is affirmed.

AFFIRMED

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TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS TX 75265

TORCZON, Administrative Patent Judge, *concurring*.

The majority is correct in holding that the appellant has not shown harmful error in the rejections on appeal. The majority understates, however, the significance of its statutory analysis. If it is correct, *In re Wertheim*, 646 F.2d 527 (CCPA 1981), is no longer tenable authority.

Wertheim posits a but-for theory for accepting a patent as prior art under 35 U.S.C. § 102(e). According to this theory, a patent can only be prior art if it satisfies the fiction that it would have been available as of an earlier filing date but for delays in the United States Patent and Trademark Office. Thus, in *Wertheim*, the reference patent could not be used as of its earliest filing date because the issued claims depended on subject matter that had been added in intervening benefit applications. 646 F.2d at 536. Under the but-for test, a provisional application could never be used for a filing date under § 102(e) because a provisional application cannot issue as a patent (or be a published application) without some additional action by the applicant.

Neither § 102(e) (then or now) nor the cases *Wertheim* cites for its theory, *Alexander Milburn Co. v. Davis-Bournonville Co.*, 270 U.S. 390 (1926), and *Hazeltine Research, Inc. v. Brenner*, 382 U.S. 252 (1965), support the but-for test. *Wertheim's* but-for theory does actual violence to *Milburn's* holding. In *Milburn*, the Court held that with a few inapplicable exceptions, “one really must be the first inventor to be entitled to a patent.” 270 U.S. at 400. The Court studiously avoided treating the reference-patentee (Clifford) as the inventor of anything, relying instead on Clifford as a reporter of what was in the art as of the filing date, regardless of its

provenance. *Id.* Although the Court dismissed delays in the Office as a reason to negate the effect of Clifford's disclosure, its bottom line was that:

We see no reason in the words or policy of the law for allowing Whitford [the patentee in the case] to profit by the delay and make himself out to be the first inventor when he was not so in fact, when Clifford had shown knowledge inconsistent with the allowance of Whitford's claim....

Id. at 401 (citations omitted). The salient point was that, before Whitford's patent issued, a publicly available government record (Clifford's disclosure issued as a patent) provided evidence that knowledge of Whitford's invention existed before Whitford's filing date. *Wertheim's* but-for prerequisite is not necessary to the outcome in *Milburn*.

Similarly, the subsequent legislation that the majority discusses shows that Congress has no notion of the but-for test. For instance, a published application is available as a reference under § 102(e) regardless of what happens in subsequent prosecution. There is no question about delays in the Office because the publication delay is mandated by statute.

How did the Court of Customs and Patent Appeals come to deviate so badly from the way Congress and the Supreme Court understood § 102(e)? The court was concerned by "secret prior art", a label used to elicit sympathy for the applicant who is denied a patent on the basis of "prior art" that the applicant could not have known about at the time it applied for its patent. In *Wertheim*, the court used its "secret prior art" concern to limit the scope of the Supreme Court precedents. 646 F.2d at 537. This concern is not consistent with American patent law.

The authority for the patent law comes from the United States Constitution, which empowers Congress—

To promote the Progress of...useful Arts, by securing for limited Times to...Inventors the exclusive Right to their respective...Discoveries....

Art. I, § 8, cl. 8. To paraphrase, the United States may exercise its coercive power on behalf of an inventor in exchange for a technological advancement. From the outset, the policy has been “that ‘things which are worth to the public the embarrassment of an exclusive patent,’ as [Thomas] Jefferson put it, must outweigh the restrictive effect of the limited patent monopoly.” *Graham v. John Deere Co.*, 383 U.S. 1, 10-11 (1966).

Congress and the Supreme Court view patent law through the lens of the Constitutional mandate, which makes no allowance for the expectations of the disappointed applicant. A reference under § 102(e) (i.e., a patent or published application) has, by definition, already provided the world with the technological advancement without the “embarrassment” of giving yet another hopeful applicant a patent. While the applicant who applied in good faith might not see this decision as “fair”, to grant the applicant a patent at this point would be to give something valuable (coercive power of the State) in exchange for nothing. Such an exchange has no place in the patent laws. *Graham*, 383 U.S. at 10-11.

Wertheim requires a strained reading of statute and precedent to address a misplaced concern about secret prior art. Were we to follow *Wertheim*, we would reverse. Instead, I join my colleagues in their decision to affirm.