THE "MATRIX" FOR CHANGING FIRST-TO-INVENT: AN EXPERIMENTAL INVESTIGATION INTO PROPOSED CHANGES IN U.S. PATENT LAW

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I. INTRODUCTION. 4

II. FIRST-TO-FILE-WITH-GRACE: THE PROPOSED CHANGES OF § 102. 6

A. *Prior Art Under the Proposed Changes of § 102(a)* 8

1. *Potential Confusion Between Proposed Changes of § 102(b) and § 100(f)* 10

2. *The Impact of "Effectively Filed" on the Proposed Changes of § 102(a)(2)* 11

B. *Exceptions to Prior Art Under the Proposed Changes of § 102(b)* 13

1. *The "Publish Behind" Grace Period Exception* 14

2. *The Derivation Exception* 15

3. *The Team Exception* 17

III. THE MATRIX. 17

FIGURE 1 – An Example of a Scenario Entry in the MATRIX 18

A. *Analysis and Results.* 19

1. *High-Level Analysis: Initial Analysis* 20

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FIGURE 2 – Scenarios Where Both Parties Have Filed Applications (Initial Analysis) 21

FIGURE 3 – Scenarios Where Only One Party is Seeking the Patent (Initial Analysis) 23

2. High-Level Analysis: Weighted Analysis 23

FIGURE 4 – Weighting Percentages for the FTI and the FTF System 25

FIGURE 5 – Weighting Percentages for FTFG/FITF Systems 26

FIGURE 6 – Scenarios Where Both Parties Have Filed Applications (Weighted) 28

FIGURE 7 – Weighted Analysis for One Applicant 29

3. Scenario-by-Scenario Analysis 29

FIGURE 8 – Different Outcomes Due to Springing Public Disclosure Exception 30

FIGURE 9A – The Effect of Derivation Proceedings (Comparing FTF vs. FITF) 32

FIGURE 9B – The Effect of Derivation Proceedings (Comparing FTF vs. FTFG) 32

FIGURE 9C – The Effect of Derivation Proceedings (Comparing FTF, FITF and FTFG) 33

B. Consequences of Switching to FTFG. 34

1. "Publish Behind" Grace Period Exception 34

2. Derivation Proceedings 36

FIGURE 10 – Derivation Example 38

3. Complexity of the "Effectively Filed Requirement" 40

FIGURE 11 – Effectively Filed Example 41

IV. CONCLUSION....................42

APPENDIX 44

I. INTRODUCTION

The Patent Reform Act of 2010[1] represents the most significant patent reform legislation in the US since 1952[2] and most notably proposes to replace the current "first-to-invent" (FTI) system with a new "first-to-file-with-grace-period" (FTFG),[3] instead of the originally proposed "first-inventor-to-file" (FITF) system.[4] The proposed FTFG and FITF systems have been characterized as attempts to more closely align US patent law with "first-to-file" (FTF) systems that are used by virtually all other countries around the world.[5] The FTFG system as proposed in the currently pending Senate bill (S. 515)[6] includes a proposed change for 35 U.S.C. § 102 (2006) that seeks to redefine prior art and effective filing of applications so as to create incentives for inventors to be the first party to

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[1] The Patent Reform Act of 2009 was introduced in the Senate as S. 515 and the House as H.R. 1260. S. 515 was amended on April 2, 2009 and reported out of the Judiciary Committee. H.R. 1260 has not been amended since its introduction on March 3, 2009. The Patent Reform Act of 2010 as an amendment in the nature of a substitute bill was introduced by Sen. Leahy on the Senate floor on March 4, 2010. S. 515, 111th Cong. (2010). For purposes of this article, Section 102 of the Senate version of the bill as reported out of the Judiciary Committee will be referenced when citations are made to the "initially modified § 102" and the Section 102 of the Senate version of the amendment introduced on March 4, 2010 will be referenced when citations are made to the "proposed changes to § 102."

[2] Patent Act of 1952, Pub. L. No. 82-593, §1, 66 Stat. 792 (1952) (current version at 35 U.S.C. §101 (2006)).

[3] S. 515, 111th Cong. (2010) (as reported by S. Comm. on the Judiciary on March 4, 2010 as an amendment to the Patent Reform Act of 2009).

[4] The earlier proposal of a "first-inventor-to-file" (FITF) system was originally presented in the Patent Reform Act of 2009 as reported out of the Senate Judiciary Committee. S. 515, 111th Cong. (as reported by S. Comm. on the Judiciary, Mar. 3, 2009 with amendments reported on Apr. 2, 2009); H.R. 1260, 111th, Cong. (as reported by H. Comm. on the Judiciary, Mar. 3, 2009). For convenience, the names of the various patent systems have been abbreviated for this article. "First to Invent" (FTI) is the current system used in the United States. "First to File" (FTF) is a system currently available in many countries around the world in which the first to file a patent application generally receives a patent. "First Inventor to File" (FITF) is the name given to the system first proposed in the Patent Reform Act of 2009 by the senators who authored the bill. "First to File with Grace Period" (FTFG) is the name given to the modified system proposed in the Patent Reform Act of 2010. This article investigates the differences among these systems. This article updates and incorporates the changes made in the amendment in the nature of a substitute that forms the proposed Patent Reform Act of 2010 S. 515, 111th Cong. (2010) with respect to the prior article by the authors comparing FTI, FTF and FITF based on the proposed Patent Reform Act of 2009. *See* Brad Pederson & Justin Woo, *The "Matrix" for First-Inventor-to-File: An Experimental Investigation into Proposed Changes in U.S. Patent Law* (Dec. 4, 2009) *available at* http://papers.ssrn.com/abstract=1518660.

[5] Letter from Gary Locke, U.S. Sec'y of Commerce, to Senator Patrick J. Leahy, Chairman of the S. Comm. on the Judiciary (Oct. 5, 2009), *available at* http://judiciary.senate.gov/resources/documents/111thCongress/upload/100509LockeToLeahySessions.pdf.

[6] S. 515, 111th Cong. (2010).

file a patent application, while attempting to maintain the flexibility of the one-year grace period available under the current FTI system. The working premise behind the push toward an FTFG or FITF system has been that, by mixing elements from both the FTI and FTF systems, the FTFG/FITF systems end up somewhere in the middle.[7] Unfortunately, an experimental investigation of likely fact patterns evaluated under the proposed FTFG/FITF systems reveals that this working premise appears to be too simplistic, as the likely outcomes under the proposed FTFG/FITF systems may be as different from both of the current FTI and FTF systems as the current systems differ from each other.[8]

The proposed FTFG system creates a new exception to prior art where any disclosures or applications following an applicant's public disclosure are not considered prior art (e.g., the so-called "grace period") as a way of replacing the current one-year grace period for printed publications and public uses by third parties, as well as eliminates the practice of permitting applicants to "swear behind" patent applications or patents having earlier filing dates where there was a prior invention by the applicant.[9] The proposed FTFG system also replaces interference proceedings, the current method of determining which party is the first inventor in the case of two competing inventors, with derivation proceedings that allow applicants to remove prior third-party disclosures or applications as prior art by showing derivation of the disclosed subject matter from the applicant. Finally, the proposed FTFG system introduces a different standard for determining the earliest date of priority of a patent application (the "effective filing date") versus the earliest date a patent application may be used as prior art (when the application is "effectively filed").

This article presents the results of a structured experimental investigation applying these changes in the proposed FTFG/FITF systems to typical fact patterns representing the possible combinations of actions by two different inventors, and comparing those results with the outcomes predicted by using either an FTI or FTF system applied to the same fact patterns. The purpose of this article is to highlight these consequences such that the legal and policy ramifications of switching from the current FTI system to an FTFG system are fully considered. The article will briefly discuss how the proposed changes of § 102 in the proposed FTFG system has clarified certain issues with the originally proposed § 102 in the FITF system that were identified in our previous version of this article.[10] The ultimate purpose of the experimental MATRIX and this article is

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[7] *Id.*
[8] *See infra* Part II.A.
[9] *See* S. 515, 111th Cong.
[10] Pederson & Woo, *supra* note 4.

to provide a glimpse into the "what if" world of an FTFG system based on the current legislation.

II. FIRST -TO-FILE-WITH-GRACE: THE PROPOSED CHANGES OF § 102

One of the hallmarks of the currently proposed patent reform legislation is a new, largely rewritten 35 U.S.C. § 102 in Senate Bill 515.[11] The proposed

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[11] (a) NOVELTY; PRIOR ART. —A person shall be entitled to a patent unless—

(1) 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; or

(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

(b) EXCEPTIONS.—

(1) DISCLOSURES MADE 1 YEAR OR LESS BEFORE THE EFFECTIVE FILING DATE OF THE CLAIMED INVENTION.—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 subsection (a)(1) if—

(A) 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; or

(B) the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor.

(2) DISCLOSURES APPEARING IN APPLICATIONS AND PATENTS.—A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if—

(A) the subject matter disclosed was obtained directly or indirectly from the inventor or a joint inventor;

(B) the subject matter disclosed had, before such subject matter was effectively filed under subsection (a)(2), been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; or

(C) the subject matter disclosed and the claimed invention, not later than the effective filing date of the claimed invention, were owned by the same person or subject to an obligation of assignment to the same person.

(c) COMMON OWNERSHIP UNDER JOINT RESEARCH AGREEMENTS.—Subject matter disclosed and a claimed invention shall be deemed to have been owned by the same person or subject to an obligation of assignment to the same person in applying the provisions of subsection (b)(2)(C) if—

(1) the subject matter disclosed was developed and the claimed invention was made by, or on behalf of, 1 or more parties to a joint research agreement that was in effect on or before the effective filing date of the claimed invention;

(2) the claimed invention was made as a result of activities undertaken

changes of § 102 redefines the current definition of prior art to more resemble an FTF system, while still attempting to provide inventors a one-year grace period before they must file a utility application. The proposed changes of § 102 also provides a number of exceptions to the redefined definition of prior art, including the use of public disclosures or derivation proceedings to disqualify prior public disclosures or filed applications from being considered as prior art during the one-year grace period. The originally proposed § 102 of the FITF system in the Patent Reform Act of 2009 also sought to implement a similar scheme.[12] The proposed

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within the scope of the joint research agreement; and

(3) the application for patent for the claimed invention discloses or is amended to disclose the names of the parties to the joint research agreement.

(d) PATENTS AND PUBLISHED APPLICATIONS EFFECTIVE AS PRIOR ART.—For purposes of determining whether a patent or application for patent is prior art to a claimed invention under subsection (a)(2), such patent or application shall be considered to have been effectively filed, with respect to any subject matter described in the patent or application—

(1) if paragraph (2) does not apply, as of the actual filing date of the patent or the application for patent; or

(2) if the patent or application for patent is entitled to claim a right of priority under section 119, 365(a), or 365(b), or to claim the benefit of an earlier filing date under section 120, 121, or 365(c), based upon 1 or more prior filed applications for patent, as of the filing date of the earliest such application that describes the subject matter.

S. 515, 111th Cong. § 2 (2010).

[12] (a) NOVELTY; PRIOR ART.—A person shall be entitled to a patent unless—

(1) the claimed invention was patented, described in a printed publication, in public use, on sale or otherwise available to the public—

(A) more than 1 year before the effective filing date of the claimed invention; or

(B) 1 year or less before the effective filing date of the claimed invention, other than through disclosures made by the inventor or a joint inventor or by others who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; or

(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

(b) EXCEPTIONS.—

(1) PRIOR INVENTOR DISCLOSURE EXCEPTION.—Subject matter that would otherwise qualify as prior art based upon a disclosure under subparagraph (B) of subsection (a)(1) shall not be prior art to a claimed invention under that subparagraph if the subject matter had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or others who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor.

changes to § 102 in the Patent Reform Act of 2010 appears to be a more streamlined approach that resolves some of the complexities associated with the originally proposed § 102.

A. Prior art under the proposed changes to § 102(a)

The proposed changes to § 102(a) redefines prior art, moving away from the notion that first inventors have the ability to eliminate some prior art by showing an earlier invention date, and moving toward an FTF system where an absolute

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> (2) DERIVATION, PRIOR DISCLOSURE, AND COMMON ASSIGNMENT EXCEPTIONS.—Subject matter that would otherwise qualify as prior art only under subsection (a)(2), after taking into account the exception under paragraph (1), shall not be prior art to a claimed invention if—
>
> (A) the subject matter was obtained directly or indirectly from the inventor or a joint inventor;
>
> (B) the subject matter had been publicly disclosed before the effective filing date of the application or patent set forth under subsection (a)(2) by the inventor or a joint inventor, or by others who obtained the subject matter disclosed, directly or indirectly, from the inventor or joint inventor; or
>
> (C) the subject matter and the claimed invention, not later than the effective filing date of the claimed invention, were owned by the same person or subject to an obligation of assignment to the same person.
>
> (3) JOINT RESEARCH AGREEMENT EXCEPTION.—
>
> (A) IN GENERAL.—Subject matter and a claimed invention shall be deemed to have been owned by the same person or subject to an obligation of assignment to the same person in applying the provisions of paragraph (2) if—
>
> (i) the subject matter and the claimed invention were made by or on behalf of parties to a joint research agreement that was in effect on or before the effective filing date of the claimed invention;
>
> (ii) the claimed invention was made as a result of activities undertaken within the scope of the joint research agreement; and
>
> (iii) the application for patent for the claimed invention discloses or is amended to disclose the names of the parties to the joint research agreement.
>
> (B) For purposes of subparagraph (A), the term "joint research agreement" means a written contract, grant, or cooperative agreement entered into by two or more persons or entities for the performance of experimental, developmental, or research work in the field of the claimed invention.
>
> (4) PATENTS AND PUBLISHED APPLICATIONS EFFECTIVELY FILED.—A patent or application for patent is effectively filed under subsection (a)(2) with respect to any subject matter described in the patent or application—
>
> (A) as of the filing date of the patent or the application for patent; or
>
> (B) if the patent or application for patent is entitled to claim a right of priority under section 119, 365(a), or 365(b) or to claim the benefit of an earlier filing date under section 120, 121, or 365(c), based upon 1 or more prior filed applications for patent, as of the filing date of the earliest such application that describes the subject matter.

S. 515, 111th Cong. § 2 (2009).

novelty standard is applied.[13] The proposed § 102(a) accomplishes this shift by (1) changing the nature of the one-year grace period,[14] and (2) awarding a patent to the party who "effectively filed" an application first, regardless of the order in which the parties invented.[15]

Under the current § 102, any public disclosure, such as a publication, sale or use, that is prior to the filing of the application and is made by a party other than the applicant is prior art. However, prior art created by a public disclosure by another that is less than one-year prior to the filing of an application can be removed if an applicant "swears behind" a reference by proving an invention date prior to the date of that public disclosure.[16] Under the current § 102(b), the one-year grace period is effectively measured backward from the filing date of the patent application,[17] and enables an earlier inventor to swear behind the date of a public disclosure by another, during this backward one-year grace period, by submitting evidence that the inventor both conceived of the invention and reduced it to practice prior to the date of the public disclosure in question.[18]

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[13] "The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application." European Patent Convention art. 54(2), Oct. 5, 1973, 1065 U.N.T.S. 199 (as amended Nov. 29, 2000) [hereinafter EPC]. "Additionally, the content of European patent applications as filed, the dates of filing of which are prior to the date referred to in paragraph 2 and which were published on or after that date, shall be considered as comprised in the state of the art." *Id.* art. 54(3).

[14] Proposed changes to § 102(a)(1). S. 515, 111th Cong. § 2 (2009); S. 515, 111th Cong. § 2 (2010).

[15] Proposed changes to § 102(a)(2). S. 515, 111th Cong. § 2 (2009); S. 515, 111th Cong. § 2 (2010). It should be noted that the exceptions under the proposed changes to § 102(b) create certain scenarios in which a patent is not awarded to the party that "effectively filed' an application first.

[16]
> When any claim of an application . . . is rejected, the inventor of the subject matter of the rejected claim . . . may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference or activity on which the rejection is based.

37 C.F.R. § 1.131 (2008).

[17]
> A person shall be entitled to a patent unless—…
>
> (b) 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 . . . .

35 U.S.C. § 102(b) (2006).

[18] The practice of "swearing behind" can also be used to remove prior filed applications which are being asserted as prior art under 35 U.S.C. § 102(e); however, this practice does not involve the concept of a grace period with respect to public disclosures. It may also be possible for an applicant to remove prior public disclosures under 35 U.S.C. § 102(a) by proving that the public disclosure in not an invention by another, but rather is the work of the inventor of the application

In contrast, the proposed changes of § 102 defines all disclosures as immediately binding prior art except for any intervening applications or disclosures made after a disclosure by or on behalf of an "inventor," provided that such an intervening application or disclosure occurs during a one-year grace period. Instead of providing applicants an option, as needed, for swearing behind prior art created by disclosures made by non-inventors, the proposed changes of § 102 requires applicants to proactively trigger the one-year grace period by their own public disclosure. This change represents a clear shift toward the absolute novelty standard of FTF systems, where any disclosure is binding on all parties even if the disclosure was by an inventor.[19] This broader definition of prior art, coupled with the inability to swear behind prior disclosures, will provide a stronger incentive for applicants to file for applications as quickly as possible.

1. Potential confusion between proposed changes to § 102(b) and § 100(f)

The newly added definition of "inventor" in the proposed amendments to 35 U.S.C. § 100(f) may create some unintended confusion about which disclosures are entitled to be used as triggers for the grace period under the proposed changes to § 102(b). "The term 'inventor' means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter *of the invention*."[20] The one-year grace period in the proposed changes to § 102(b) provides that disclosures made by an "inventor" may trigger the one-year grace period.[21] However, the definition of "inventor" in the proposed amendments to § 100(f) is not limited to the applicant for the claimed invention presented in a given patent application, but rather includes any party who "invents or discovers the subject matter of the invention." When the two proposed Sections are read together the result may be that a disclosure by any third-party who independently discovers or invents the subject matter of the invention is sufficient to trigger the one-year grace period that could then apply to the patent application filed by another. In other words, an applicant can still obtain a patent for one year following the disclosure of the subject matter of the invention by any third party as long as that party is an inventor. The broad definition of "inventor" in § 100(f), and the fact that the definition is not tied to the application by referencing the "claimed invention" seemingly contravenes the intent of the language of the proposed changes to § 102(a)(1) by expanding the types of disclosures that might be used to trigger a one-year grace period.

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in question; however, this practice also is not conventionally thought of as involving the concept of a grace period with respect to public disclosures.

[19] EPC, *supra* note 13, art. 54.

[20] S. 515, 111th Cong. § 2 (2010).

[21] *Id.*

If the goal of the Patent Reform Act is to limit the types of disclosures that are entitled to the one-year grace period to just those of the inventor of the application at issue, a clarification to the § 100(f) amendment can be made to make this definition more consistent with the proposed changes to § 102(a)(1). If the language of the amendment of § 100(f) was changed to read "the subject matter of the *claimed* invention,"[22] public disclosures that could be used to trigger the one-year grace period would be limited to those made by the applicant as the inventor of the claimed invention for which protection is being sought in the patent application.[23]

2. The impact of "effectively filed" on the proposed changes to § 102(a)(2)

The current § 102 defines prior applications as prior art in a similar fashion to prior public disclosures by allowing first inventors to remove prior applications as prior art if the first inventor can prove an earlier invention date than the prior applicant.[24] This is typically done by swearing behind the filing date of the prior application to prove an earlier date of invention.[25] In contrast, the proposed changes to § 102(a)(2) defines any prior application as prior art against any subsequent application, regardless of the order of invention by the respective applicants.

> (a) Novelty; Prior Art. -- A person shall be entitled to a patent unless…
>
> > (2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.[26]

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[22] It is noted that the proposed manager's amendment does not appear to cure the ambiguity created by the proposed § 100(f) because the manager's amendment does not amend § 100(f) as suggested, or otherwise limit the parties whose disclosures are entitled to the one-year grace period to the applicant for the patent.

[23] The subsequent analysis of the proposed FTFG/FITF systems was conducted with the assumption that the proposed amendment will ultimately be adopted.

[24] 35 U.S.C. § 102(g).

[25] Affidavits or declarations under 37 C.F.R. § 1.131 may be used to antedate or "swear behind" references that have prior art dates less than one year before the filing date and do not claim the "same patentable invention." MANUAL OF PATENT EXAMINING PROCEDURES § 715.05 (2008). If the prior reference claims the same patentable invention, the patentee may not swear behind the reference, but may suggest an interference proceeding to determine order of invention by the respective parties. 37 C.F.R. § 1.131(1) (2008).

[26] S. 515, 111th Cong. § 2 (2010).

The proposed changes to § 102(a)(2) expands the definition of prior art to include any prior application that is "effectively filed" before the effective filing date of a subsequent application, even if the later application is filed by a first inventor.[27] As with the redefining of prior art created by disclosures, the new definition of prior art created by prior applications represents a shift toward the FTF system.[28]

The complexity of this new definition of prior applications as prior art arises later in the proposed changes to § 102 where the meaning of "effectively filed," for purposes of the FTFG system, is defined as set forth in the proposed changes to § 102(d).

> (d) PATENTS AND PUBLISHED APPLICATIONS EFFECTIVE AS PRIOR ART.—For purposes of determining whether a patent or application for patent is prior art to a claimed invention under subsection (a)(2), such patent or application shall be considered to have been effectively filed, with respect to any subject matter described in the patent or application—
>
> (1) if paragraph (2) does not apply, as of the actual filing date of the patent or the application for patent; or
>
> (2) if the patent or application for patent is entitled to claim a right of priority under section 119, 365(a), or 365(b), or to claim the benefit of an earlier filing date under section 120, 121, or 365(c), based upon 1 or more prior filed applications for patent, as of the filing date of the earliest such application that *describes the subject matter*.[29]

Under the current § 102, a prior application that describes the invention is presumptively prior art as of its filing date against any subsequent application with a later filing date.[30] Similarly, a subsequently filed application is presumptively prior art to a third party's earlier filed application if the subsequently filed application claims priority to an application having a filing date before the effective filing date of the third party application.[31] The proposed

[27] *Id.*

[28] EPC, *supra* note 13, art. 54(3).

[29] S. 515 111th Cong. § 2 (emphasis added).

[30] "A person shall be entitled to a patent unless—

(e) the invention was described in (1) an application for patent . . ." 35 U.S.C. § 102(e)(1) (2006).

[31] *See* 35 U.S.C. § 102(e)(2) ("A person shall be entitled to a a patent unless—

(e) the invention was described in . . . (2) a patent granted on an application for patent by another field in the United States before the invention by the applicant for patent . . . ").

changes to § 102(d) seeks to imitate this definition of prior art by defining any subject matter of an application that claims priority to an earlier application as prior art, effective as of the date on which the priority application describes the subject matter.[32]

However, in contrast to the current § 102, the "effectively filed" definition in the proposed changes to § 102(d) pertains generally to any subject matter described in an application and not necessarily just the claimed invention, as defined under the current § 102. In other words, all of the subject matter in an application, including subject matter not covered by the claims, is prior art that is backdated to the date that the subject matter is first described by the priority application. The proposed changes to § 102(d) does not impose an enablement requirement on the quality of the prior description as it goes beyond the invention to cover any subject matter *described* in the specification, whether or not that description would be enabling under the enablement requirement of 35 U.S.C. § 112.[33] As such, a broad disclosure in the priority application may be used in subsequent applications to prevent other parties from patenting subject matter generally described by the initial broad disclosure. The "effectively filed" definition in the proposed changes to § 102(d) may create unintended incentives for parties to provide broad descriptions of subject matter in priority applications in an attempt to block others from the subject matter area covered by the broad disclosure.

B. Exceptions to prior art under the proposed changes to § 102(b)

While providing broad definitions of prior art to create incentives for early filing of applications with broad disclosures, the proposed changes to § 102(b) creates equally broad exceptions to prior art. The three general categories of exceptions created in the proposed changes to § 102(b) include: (1) the "publish behind grace period" exception that triggers a grace period as a result of public

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> It is also well settled that where a patent purports on its face to be a 'continuation-in-part' of a prior application, the continuation-in-part application is entitled to the filing date of the parent application as to all subject matter *carried over* into it from the parent application, whether for purposes of obtaining a patent or subsequently utilizing the *patent* disclosure as evidence to defeat another's right to a patent.

In re Lund, 376 F.2d 988 (1967) (citing 35 U.S.C. §§ 102(e), 120; Goodyear Tire & Rubber Co. v. Ladd, 349 F.2d 710 (1965)).

[32] S. 515 111th Cong. § 2.

[33] "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same . . . " 35 U.S.C. § 112.

disclosure by an inventor,[34] (2) the "derivation" exception for subject matter obtained directly or indirectly from the inventor,[35] and (3) the "team" exception that excludes prior art from others who are working for the same team, either a common assignee or a member of a joint research team.[36]

1. The "publish behind" grace period exception

In contrast to the current option to "swear behind" prior art references during the grace period, the proposed changes to § 102(b)(1) provide an exception for prior art disclosures within the backward-looking one-year grace period, provided that there was a public disclosure by or on behalf of an inventor that was before the date of the prior art disclosure.[37] This "publish behind" approach in the proposed changes to § 102(b) for effectively trumping prior art of others during the one-year grace period applies to prior art based on either a public disclosure—proposed changes to § 102(b)(1)—or a disclosure contained in another patent application filed before the effective filing date of the application in question—proposed changes to § 102(b)(2).

> (b) EXCEPTIONS. —
>
> (1) DISCLOSURES MADE 1 YEAR OR LESS BEFORE THE EFFECTIVE FILING DATE OF THE CLAIMED INVENTION. —*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 subsection (a)(1) if— . . .*
>
> (B) *the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor* or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor.
>
> (2) DISCLOSURES APPEARING IN APPLICATIONS AND PATENTS. —A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if— . . .
>
> (B) *the subject matter disclosed had, before such subject matter was effectively filed under subsection (a)(2), been publicly disclosed by the inventor* or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; . . .[38]

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[34] *Id.*
[35] *Id.*
[36] *Id.*
[37] *Id.*
[38] S. 515, 111th Cong. (2010) (emphasis added).

The currently proposed § 102(b) in the 2010 Patent Reform Act solves a potential problem with the originally proposed § 102 in the 2009 Patent Reform Act that had sought to define the one-year grace period as a forward-springing period measured from the date of a public disclosure by or for an inventor, rather than a backward-looking period measured from the effective filing date of an application. While the proposed changes to § 102 create an easier to understand scheme, an option to "publish behind" for FTFG instead of the current option to "swear behind" under FTI, the burden will be shifted to the inventor to preemptively exercise the option to "publish behind" when determining how to disclose and file for an invention. Instead of waiting to see whether there might be potential prior art during the one-year grace period that needs to be removed by swearing behind that potential prior art, an inventor will now need to proactively make a choice of whether to trigger the grace period for a given patent application by making some kind of public disclosure that will invoke the "publish behind" grace period exceptions of the proposed changes to § 102(b).

2. The derivation exception

The new derivation exception allows applicants to attempt to remove prior disclosures or prior filed applications as effective prior art if the applicant can show that the party making the disclosure or filing the application obtained the disclosed subject matter from the applicant, either directly or indirectly.

> (b) EXCEPTIONS.—
>
> (1) DISCLOSURES MADE 1 YEAR OR LESS BEFORE THE EFFECTIVE FILING DATE OF THE CLAIMED INVENTION.—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 subsection (a)(1) if—
>
> (A) 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*; or …
>
> (2) DISCLOSURES APPEARING IN APPLICATIONS AND PATENTS.—A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if—
>
> (A) *the subject matter disclosed was obtained directly or indirectly from the inventor or a joint inventor.*[39]

In order to determine whether another applicant has "obtained the subject matter" from the inventor or joint inventor so as to qualify for this exception, the

[39] S. 515 111th Cong. § 2 (emphasis added).

proposed FTFG system replaces current interference practice[40] with a new derivation proceeding.[41] Unlike current interference practice that can be instituted by either an applicant or an examiner, only an applicant can initiate a request for a derivation proceeding.[42] Also unlike current interference practice that requires an applicant to have "copied" claims on file either within one year of the publication of an application or the issuance of a patent,[43] an applicant must make a request for a derivation proceeding within one year from the first publication of an application containing the claimed subject matter. Once a derivation proceeding is initiated, the Board of Appeals makes a determination on the merits. While the procedures for this determination procedure are not specified, it is likely that the procedures at the Board of Appeals would follow a similar approach to that used by the Board of Patent Appeals and Interferences for managing an interference proceeding.

What is not clear in the proposed FTFG system is what constitutes a "derivation" where the subject matter of an invention was improperly obtained.[44] Unlike other FTF systems that provide a mechanism for preventing "bad actors" from masquerading as prior inventors, the language of the proposed FTFG system could implicate something more like derivation in the copyright context where both bad actors violating a confidential relationship and innocent actors who validly obtain non-public information from the inventor could find themselves caught within the scope of this exception.

While the statute leaves the new derivation proceedings largely open for interpretation, derivation proceedings, purely on the face of the statute, could represent a marked departure from the equivalent proceedings available under the current systems in the US and around the world. The FTF system created by the European Patent Convention (EPC) provides a "non-prejudicial disclosures" exception that allows parties to remove an earlier disclosure or application as prior art if the applicant claims that the earlier disclosure was the result of "an

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[40] 35 U.S.C. § 135.

[41] Proposed changes to § 135, S. 515, 111th Cong. § 2 (2009); S. 515, 111th Cong. § 2 (2010).

[42] Proposed changes to § 135, S. 515, 111th Cong. § 2 (2009); S. 515, 111th Cong. § 2 (2010).

[43] 35 U.S.C. § 135(b)(1)-(2). It should be noted that the one year statute of repose can start running based on the issue date where the claims in the issued patent have been materially changed since publication.

[44] In personal communications with Robert Armitage, one of the contributors to the proposed language of the new bill, the authors have confirmed that the intention behind the concept of derivation under the patent statute is not meant to implicate a copyright like concept of derivation. Interview with Robert A. Armitage, Senior Vice President and General Counsel, Eli Lilly & Co. (Oct. 29, 2009). There currently is no report accompanying the bill which might serve to clarify this issue.

evident abuse in relation" between the applicant and the disclosing party.[45] Meanwhile, the newly proposed derivation proceedings do not expressly require a successful showing of an earlier invention date or a pre-existing relationship between the applicant and disclosing party, abused or otherwise. Instead, the proposed derivation proceedings only require a showing of direct or indirect derivation of the claimed subject matter. It is expected that until courts have an opportunity to clarify the potentially broad scope of the new derivation proceedings, confusion about the intended scope of the derivation exception will significantly increase the complexities of implementing the new FTFG system.

3. *The team exception*

While not a new exception, the proposed FTFG system continues the current statutory scheme that allows applicants to remove prior filed applications as effective prior art so long as the inventors of such prior filed application are working for the same "team" as the applicant. The same team can mean either the same assignee—proposed changes to § 102(b)(2)(C)—or a joint research agreement that was in place—proposed changes to § 102(b)(3). As long as either situation applies, the applicant can remove prior applications filed by others as a prior filed application under § 102(a)(2) until such time as those applications are published and become prior art as a publication under the proposed changes to § 102(a)(1).

III. THE MATRIX[46]

The authors created a "what if" world, where application of the new FTFG/FITF systems could be examined by building a MATRIX of approximately 200 possible scenarios.[47] Each scenario included two parties where at least one party was seeking to patent a claimed invention. A variety of factors were introduced in each scenario that changed the dates of various actions by the parties or whether or not a party was entitled to a patent. The scenarios were each analyzed using the FTI system under current US patent law, the FITF system as originally proposed in the Patent Reform Act of 2009,[48] and the FTFG system in the Patent Reform Act of 2010,[49] and a representative FTF system based primarily on the European Patent Convention (EPC),[50] to determine which party, if any, is entitled to a patent under that particular system.

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[45] EPC, *supra* note 13, art. 55.
[46] *See* MATRIX, *infra* APPENDIX.
[47] *Id.*
[48] S. 515, 111th Cong. (2009).
[49] S. 515, 111th Cong. (2010).
[50] *See* EPC, *supra* note 13, arts. 54–55. The representative FTF system is based on the European Patent Convention (EPC) focusing primarily on Articles 54 and 55 of the EPC.

The collection of scenarios that form the MATRIX were developed by varying six general factors that affect the effective dates of the parties, and whether the parties are even entitled to a patent. These factors include: (1) the order in which the parties invented the claimed invention, (2) if either party publicly disclosed the invention prior to filing an application, (3) if the parties filed a provisional application to which priority is claimed, (4) the order in which the parties publicly disclosed the invention and/or filed their respective applications, (5) whether a priority application met the 35 U.S.C. § 112 standards, such that priority may properly be claimed,[51] and (6) whether the first inventor made a derivation claim[52] against another party's public disclosure or application.[53]

<table>
<tr><th rowspan="2">Scenario Number</th><th rowspan="2">Scenario</th><th rowspan="2">Order of Invention</th><th colspan="2">Public disclosure</th><th colspan="3">Provisional Application</th><th colspan="5">Non-Proviational Application</th><th rowspan="2">Derivation Claim</th></tr>
<tr><th>Publicly disclosed</th><th>Timing</th><th>Filed</th><th>Meets §112</th><th>Timing</th><th>Meets §112</th><th>Claimed</th><th>Published</th><th>Issued</th><th>Timing</th></tr>
<tr><td rowspan="2">1*</td><td>A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility</td><td rowspan="2">B invents before A</td><td>Yes</td><td rowspan="2">B discloses before A</td><td>Yes</td><td>Yes</td><td rowspan="2">A files prov after B discloses</td><td>Yes</td><td>Yes</td><td>Yes</td><td>??</td><td rowspan="2">A files util after B discloses</td><td rowspan="2">No</td></tr>
<tr><td>B (1) publicly discloses <u>before</u> A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application</td><td>Yes</td><td>Yes</td><td>Yes</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
</table>

FIG. 1 An example of a scenario entry in the MATRIX

From the hundreds of possible scenarios, approximately 200 "interesting" scenarios were selected by eliminating repetitious scenarios,[54] those scenarios with unhelpful results[55] and scenarios resulting from attorney mismanagement.[56]

Specifically, the standard articulated in Articles 54(2)-(3) EPC were the basis for the absolute novelty standard used in the representative FTF system. Similarly, the "non-prejudicial disclosure" exception articulated in Article 55 EPC was also incorporated into the representative FTF system for comparison with the proposed derivation proceedings.

[51] To effectively compare the four systems, the representative FTF system deviates from the European Patent Convention in that the representative system allows provisional application. The provisional applications allowed under the representative system were treated as being subject to the same 35 U.S.C. §112 enablement standards required of provisional applications under the current US law. The authors welcome any comments or suggestions on whether the deviation creates results that do not accurately reflect an FTF system.

[52] For the purposes of the proposed FTFG/FITF systems and the fictitious FTF system, any derivation claim made by a party was assumed to successfully meet the requirements for bringing the claim articulated in the proposed 35 U.S.C. § 102(b) or under Article 55 of the European Patent Convention.

[53] *See infra*, FIG. 1; MATRIX, *infra* APPENDIX.

[54] Repetitious scenarios are scenarios where the only difference between the scenarios is a reversal of the roles of the parties. For example, a scenario where party A files a non-provisional application before party B files an application is essentially the same fact pattern as a scenario where party B files a non-provisional application before party A files an application.

[55] "Unhelpful" scenarios are scenarios where the authors felt that the results of the scenarios do not provide useful information to the analysis. For example, a scenario where party A files a provisional application after which party B files a non-provisional application, but party A never

The scenarios were broadly categorized into groups where (1) only one of the parties is seeking the patent and the other party's actions potentially create prior art, and (2) both parties are seeking a patent on the same subject matter. The scenarios were further subdivided into five subcategories based on combinations of publish/file actions by the parties: (1) Party A and Party B both publicly disclose the invention and file patent applications, (2) Party A publicly discloses and files a patent application, Party B only files a patent application, (3) Party A and B only file patent applications, (4) Party A only files a patent application, Party B only publicly discloses, and (5) Party A publicly discloses and files a patent application, Party B only publicly discloses.

The purpose of the MATRIX was not to provide an example of every possible scenario, but rather to provide a complete enough picture to present some potential insights into the broad effects of the similarities and differences between the current FTI and FTF systems and the proposed FTFG/FITF systems, while maintaining enough fidelity to appreciate the consequences of the FTFG/FITF systems on each individual scenario.[57]

A. *Analysis and Results*

Analysis of the MATRIX reveals that the proposed FTFG/FITF systems often serve as a midway point between the FTI and FTF systems, but in other scenarios the proposed FTFG/FITF systems resemble a completely new system instead of a hybrid.[58] Further analysis reveals that the derivation and purpose behind grace period/springing public disclosure exceptions to prior art that are available only under the proposed FTFG/FITF systems were the primary causes of this deviation from the intended purpose of harmonizing worldwide patent systems. In comparing the FTFG and FITF systems, the authors found that the streamlined language of the FTFG system was more easily applied and resolved many of the ambiguities plaguing the FITF system. However, the FTFG system in many ways is essentially a streamlined version of FITF sharing the same underlying policy goals causing similar outcomes in many scenarios.

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converts the provisional application to a non-provisional. In this case, the effect of the provisional application is irrelevant as party A never converts the application to a non-provisional application and provisional applications do not convey patent rights.

[56] Attorney mismanagement scenarios arise in fact patterns that can only come about through attorney mismanagement of the case. For example, a case involving a provisional application that meets the 35 U.S.C. § 112 (2006) enablement standards and a subsequently filed non-provisional application that fails the § 112 enablement standards typically only arises in cases of attorney mismanagement.

[57] The authors recognize that the selection of the incorporated scenarios relied at least partially on the judgment of the authors and welcome suggestions or comments on scenarios that should be included or excluded from the MATRIX.

[58] *See* MATRIX, *infra* APPENDIX.

Specifically, the springing public disclosure exception in the FITF system seemed to permit situations where second inventors who file second are awarded patents, which would seem to be in direct conflict with the underlying principles of both the FTI and FTF systems. The policy behind the grace period exception under the FTFG system does not appear to reduce the number of fact patterns where this outcome might occur, but seems to increase the situations in the FTFG system where a second inventor who is second to file, but first to publish, can be awarded a patent. Similarly, the derivation exception seems to have much broader applicability and effect on the outcomes of scenarios than any equivalent under the FTI and FTF systems. Furthermore, certain complexities inherent in implementing the new FTFG/FITF systems, such as the interplay between the new "effectively filed" requirement for creating prior art through prior applications and the potential for provisional patent applications that may not provide an otherwise enabling disclosure, became evident in the scenario-by-scenario analysis. These consequences will likely have broad ranging public policy effects that should be considered prior to the implementation of the proposed FTFG/FITF systems.

1. High-level analysis: Initial analysis

The initial analysis consisted of a raw tabulation of which party was awarded the patent in each scenario as compared to whether that party was the first or second party to invent. The initial analysis revealed that the results produced by the FTFG/FITF systems are not fully consistent with a middle ground between FTI and FTF. Specifically, analysis results indicated that the FTFG/FITF systems produce results that could not occur under either the FTF or the FTI systems.

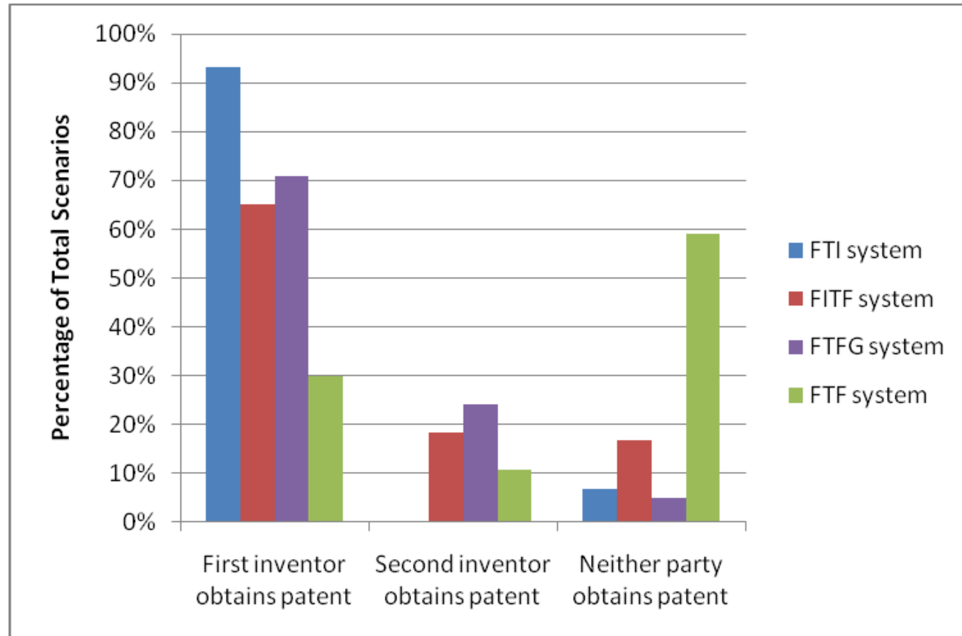

FIG. 2 – Scenarios where both parties have filed applications (initial analysis)

The FTI system is governed by the underlying "first to invent" principle in which the first inventor is granted the patent in almost all scenarios. In contrast, the FTF system will award the patent to the second inventor if the second inventor is the first to file their own respective application. However, the FTF system that is used in the MATRIX for comparison is governed by the absolute novelty standard and will award neither party the patent if a public disclosure is made before any application is filed. The FTFG/FITF systems are governed by neither the overarching first to invent standards or the absolute novelty standards, thereby allowing the FTFG/FITF systems to produce results not possible under either current system. The initial analysis reveals that more scenarios where second inventors are awarded the patent occur under the FTFG/ FITF systems than either FTI or FTF.[59] Analysis also revealed that this inconsistent result appears to be exaggerated, rather than minimized with the proposed FTFG system, as an even greater number of scenarios result in second inventors being awarded the patent.[60] If the proposed FTFG/FITF systems were a true shift toward FTF, the results should show that FTFG/FITF would award the second inventor patents in certain scenarios, but more frequently deny the patent to either party. Instead, the results of the initial analysis indicate that the proposed FTFG/FITF systems are far more

[59] *See supra* FIG. 2.
[60] *Id.*

likely to award the patent to a party rather than deny the patent to any party and can even award that patent to a second inventor.[61] The exaggerated result with respect to second inventors being awarded patents as shown by the analysis for FTFG[62] may be the result of the more streamlined language of the FTFG system then the more ambiguous language of the FITF system. While FITF also may be capable of producing similar results, in analyzing the scenarios under FITF the authors took a more conservative approach to evaluating the results of scenarios where ambiguities in the language of the FITF system existed.[63] However, the discrepancy existed in both systems revealing the tendency of FTFG/FITF in certain scenarios to behave as an entirely different system, rather than as some form of a midway point in the transition from FTI to FTF.[64]

The uniqueness of the FTFG/FITF systems is reinforced when the effects of a third party's prior art on an applicant are considered. As with the initial analysis of the two applicant scenarios, analysis of single applicant scenarios consisted of a raw tabulation of whether the applicant was awarded the patent and whether the applicant was the first inventor. As previously discussed, the scope of activities that create binding prior art under the proposed changes to § 102 is broadened to more closely resemble FTF by reducing the types of prior art entitled to a one-year grace period and by effectively preventing applicants from removing prior art by showing an earlier invention date.

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[61] *Id.*
[62] *Id.*
[63] *See* Pedersen & Woo, *supra* note 4.
[64] *See supra* FIG. 2.

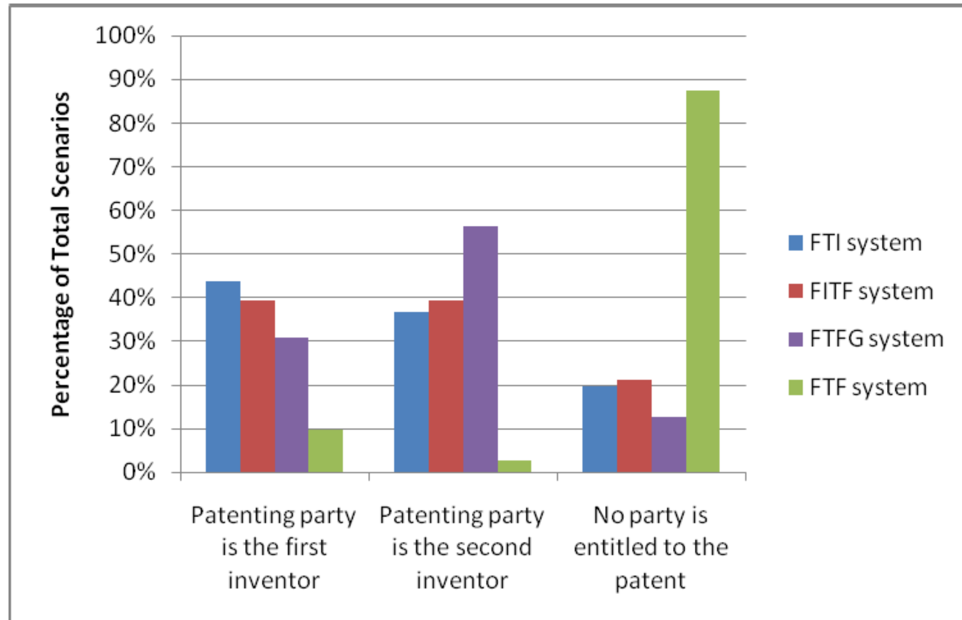

FIG. 3 – Scenarios where only one party is seeking the patent (initial analysis)

Under these scenarios, FTFG/FITF more closely resembles FTI than FTF.[65] As previously discussed, because of the absolute novelty standard, the FTF system used in the MATRIX will virtually always bar any party from receiving a patent if a public disclosure has occurred. However, the MATRIX shows that in the scenario category where one party is creating prior art against an applicant party through public disclosure, an FTF system will produce a high number of scenarios where neither party is entitled to the patent.[66] If the proposed FTFG/FITF systems were a true compromise between FTI and FTF, the results produced by the new systems would show a large number of scenarios where the patent was denied to either party. However, our analysis reveals that the results produced by the FTFG/FITF systems still more closely resemble the results produced by the current FTI system, despite the significant modification in the proposed changes of § 102 with the stated purpose of moving away from the FTI system.[67]

2. High-level analysis: Weighted analysis

A subsequent high-level analysis compiled a weighted tabulation of which party was awarded the patent in each scenario as compared to whether that party

[65] *See supra* FIG. 3.
[66] *Id.*
[67] *Id.*

was the first or second party to invent. The purpose of the weighted analysis is to ascertain whether the unique results produced by the FTFG/FITF systems are anomalies, limited to relatively few fact patterns, or are instead the result of a fundamental aspect of the FTFG/FITF systems affecting many fact patterns and patent applicants.[68] The weighted analyses assigned to each subcategory of publish/file scenarios represents a weighting reflecting an approximated percentage of the total scenarios represented by each subcategory. The relative percentages of the total scenarios represented by each publish/file subcategory are rough estimations based on the different incentives provided to different types of patentees under each system. The types of patentees considered in the analysis include: (1) start-up companies building new patent portfolios, (2) established companies continuing or expanding existing patent portfolios, (3) solo inventors with limited resources for pursuing patents, and (4) universities or research institutions where patenting may be a secondary goal to publication. The working assumption made in the weighted analysis is to estimate whether different types of patentees behave similarly or differently in each of the five types of publish/file subcategories, depending on the incentives provided under each patent system.

After considering the incentives under both the FTI and FTF systems, the authors elected to assign identical weightings to all of the five types of publish/file subcategories, despite the different rule on priority and different types of applicants.[69] The FTI and FTF systems were assigned equal weightings across all categories because the various applicant groups under both systems tend to have similar publication practices, despite the different timing of filing incentives provided under each system.[70] In other words, regardless of whether applicants are encouraged to file before publication or to potentially wait to file until the end of a grace period, there is nothing inherent about these differences in incentives regarding timing of the filing of patent applications that necessarily changes the behavior of the different groups of applicants as to whether they would or would not publish or publicly use an invention.

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[68] The current opinion of the USPTO is that the proposed FTFG/FITF systems will have only a minimal impact. Posting of David Kappos to Director's Forum: David Kappos' Public Blog, http://www.uspto.gov/blog/director/entry/director_s_forum_david_kappos (Nov. 19, 2009, 11:37 EST) ("As currently presented in patent reform, the first inventor to file system will impact very few applicants and applications and will be a critical step toward global patent law harmonization.").

[69] *See infra* FIG. 4.

[70] *See id.*; MATRIX, *infra* APPENDIX (representing the authors' comparative analysis of publishing trends across FTI and FTF systems).

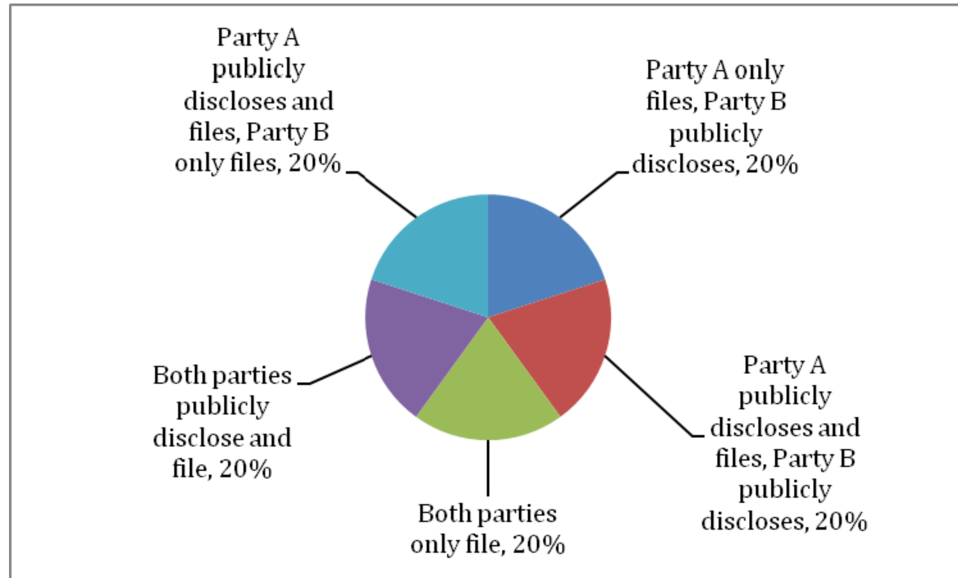

FIG. 4 – Weighting percentages for the FTI and the FTF system

While the current FTI system provides all four kinds of applicant groups with the flexibility of publishing the subject matter of an invention up to a year prior to filing a patent application, the current FTI system does not actually provide patent incentives for applicants to publish inventions rather than directly filing applications. The publication of the subject matter of the invention by the applicant prior to filing the application typically neither benefits nor hinders the applicant’s chances of obtaining the patent. Instead, non-patent incentives, such as academic publication, commercialization of new inventions, or lack of marketing resources, are more likely to drive the decision of whether to publish the subject matter of an invention or directly file a patent application for any given kind of applicant group.[71] Similarly, under the FTF system, the different subcategories were also assigned equal weighting.[72] Although the absolute novelty standard provides an incentive for patent applicants to file before publishing the subject matter of the invention, the absolute novelty standard again is only concerned with the timing of publication and does not actually provide any incentive to publish rather than file. Provided the applicant files an application before publishing the subject matter of the invention, the publication has no effect

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[71] The authors recognize the potential inaccuracy of the estimations based on the mentioned factors and welcome any input as to data showing actual percentages of cases falling into each subcategory in the current FTI system. For example, any data on whether the US Patent Laws significantly change behavior of international-based applicants might affect the estimations of percentages of subcategories.

[72] *See supra* FIG.4.

on whether the patentee obtains the patent. As with the FTI system, applicants are driven to publish by business, academic or other non-patent incentives to publish or directly file the application. Consequently, the five different kinds of publish/file subcategories were assigned equal weighting under the FTF and FTI system as the systems themselves do not provide the incentive to publish as opposed to directly file.[73]

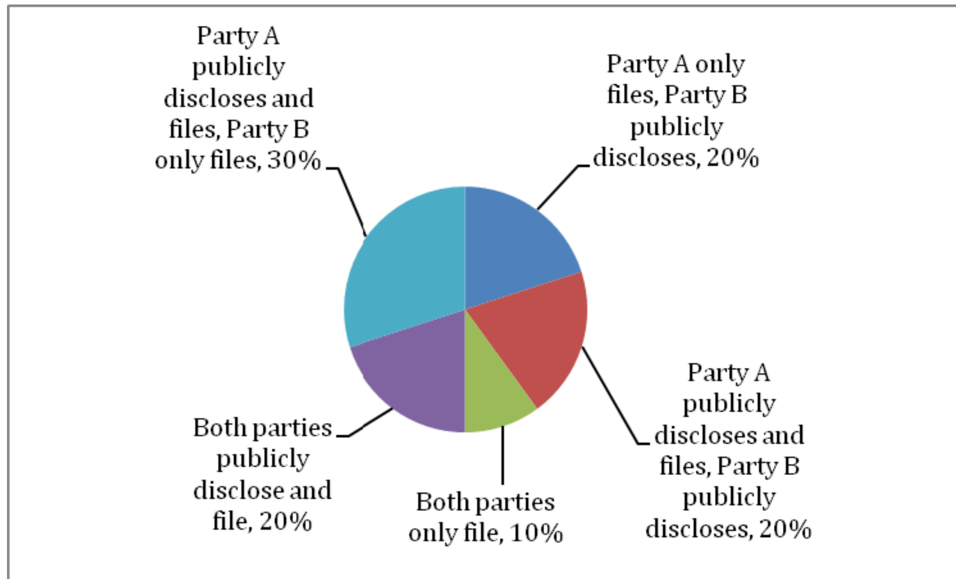

FIG. 5 – Weighting percentages for FTFG/FITF systems

In contrast, the proposed FTFG/FITF systems, create patent-based incentives for applicants to publish by providing a "publish behind" grace period/springing public disclosure exception to prior art for applicants who publish. While non-patent concerns may influence an applicant's decision to publish, the FTFG/FITF systems provide significant prior art advantages to applicants who publish in addition to filing a patent application. Unlike the estimations of a nearly equal split among the five subcategories of publish/file combinations for the current FTI and FTF systems,[74] the authors believe that the proposed FTFG/FITF systems, coupled with easier access to publication via the Internet, will result in a shift of behavior on the part of the applicant community toward more use of the public disclosure aspect of the various subcategories.[75] The likely shift in patent

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[73] *Id.*

[74] *See supra* FIG. 4.

[75] *See supra* FIG. 5. As with the estimations for the relative occurrence of each subcategory under the current FTI system, the estimations for percentages of subcategories occurring under the

applicant behavior to favor publication would seem to apply across all of the four general types of applicants. This shift was reflected in the weighted analysis by assigning a higher weighting to scenarios where patent applicants publish than to scenarios where the applicants file without publication. Similarly, the relatively rare occurrence of interference proceedings under the current FTI system[76] was presumed to carry-forward to the proposed derivation proceedings provided under the FTFG/FITF systems. As such, any scenario in which derivation was claimed was excluded from the weighted tabulation.

As with the initial analysis, the weighted analysis split the tabulation between two applicant scenarios where both parties are seeking to patent the subject matter,[77] and one applicant scenarios where only one party is seeking to patent the subject matter and the actions of the other party create prior art.[78] The weighted analysis of the two party scenarios confirmed that the FTFG/FITF systems produce results inconsistent with a transition from an FTI system to an FTF system.[79] The weighted analysis also indicated that the inconsistencies preventing the FTFG/FITF systems from acting as a hybrid of the FTI and FTF systems are fundamental to the FTFG/FITF systems and not an anomaly limited to rare fact patterns.

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proposed FTFG/FITF systems are based on the judgment and experience of the authors. Any input or suggestions on the rationale underlying these estimations or predictions of future applicant behavior under the proposed FTFG/FITF systems are welcomed.

[76] USPTO data on interferences declared and utility patent applications filed from FY2006-FY2009 suggest that the relative frequency of interferences declared as a percentage of utility patent applications filed in any given year is less than 0.01%.

[77] *See infra* FIG. 6.

[78] *See infra* FIG. 7.

[79] *See infra* FIG. 6.

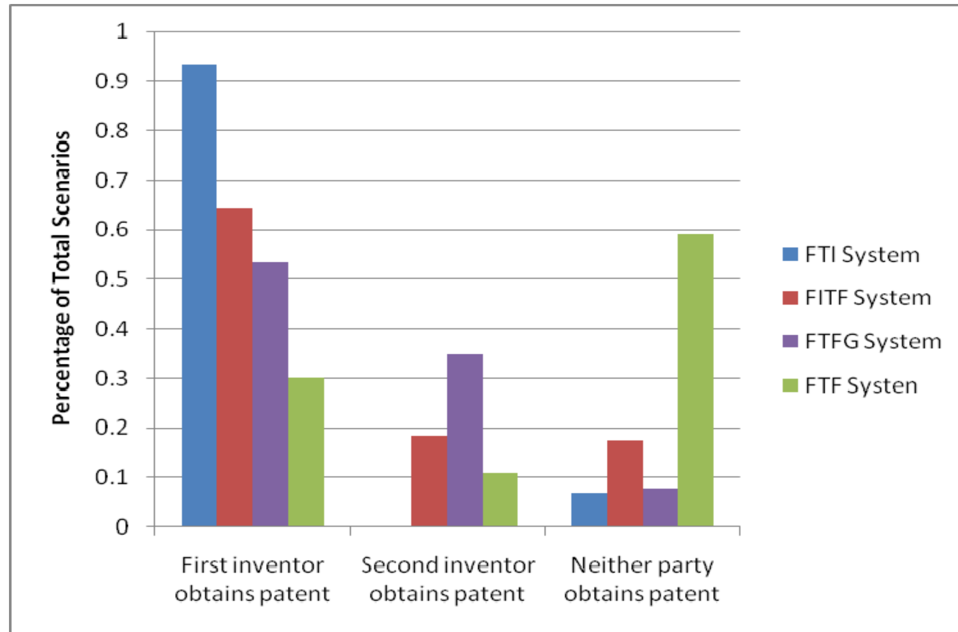

FIG. 6 – Scenarios where both parties have filed applications (weighted)

The weighting of the two party scenarios in terms of which scenarios are more likely to occur under the proposed FTFG/FITF systems seems to emphasize, rather than minimize, the inconsistent result that a substantially larger number of second inventors would obtain patents.[80] The analysis revealed that a higher percentage of second inventors obtain the patent under the weighted analysis than under the initial analysis of the raw numbers. If the weighted estimations and this analysis are correct, it appears to indicate that the inconsistencies of the FTFG/FITF systems will be exaggerated as a result of an expected shift in applicant filing and publication behaviors in response to the incentives of the proposed FTFG/FITF systems. The weighted analysis also revealed that derivation proceedings may serve as a buffering element, minimizing the inconsistencies of the FTFG/FITF systems. Without derivation proceedings as a factor, a larger percentage of the total scenarios resulted in second inventors obtaining a patent in the weighted analysis than the initial analysis. Consequently, if derivation procceedings continue to be as rare as current inteference proceedings, the inconsistencies of the FTFG/FITF systems may be further emphasized.

Unlike the differences noted in the weighted analysis of scenarios where both parties file a patent application, the weighted analysis of scenarios where only a

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[80] *See supra* FIG. 6.

single party files a patent application did not produce results different than the intitial analysis of raw data. As such, the weighted analysis confirmed the findings of the initial analysis that the FTFG/FITF systems seem to closely resemble the FTI system in scenarios where only a single party is vying for the patent.[81]

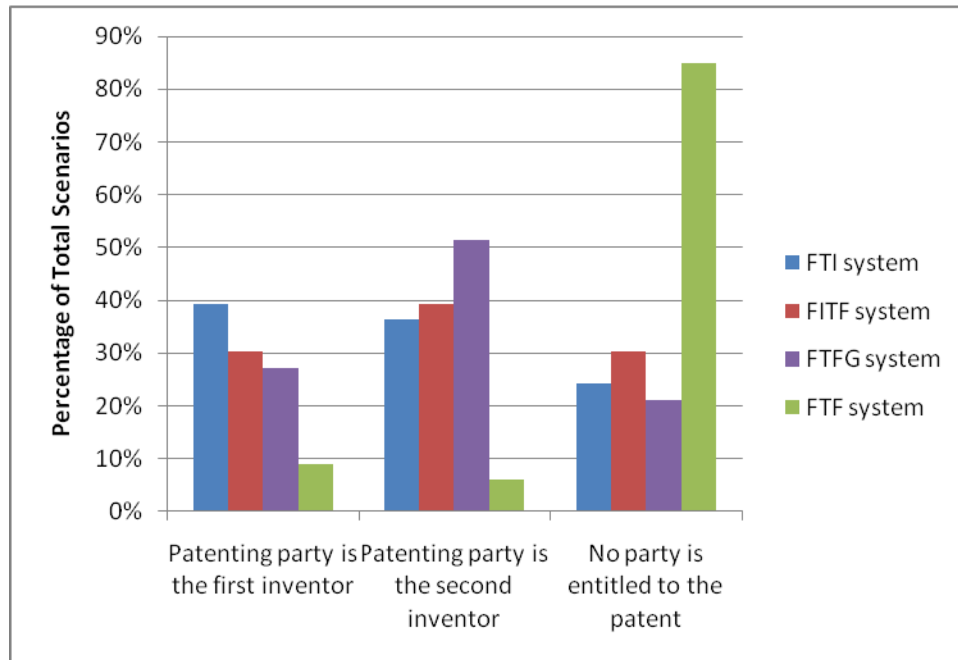

FIG. 7 – Weighted analysis for one applicant

3. Scenario-by-scenario analysis

While a high-level analysis of the MATRIX results reveals that the proposed FTFG/FITF systems may not be perfect hybrids of the FTI and FTF systems, a scenario-by-scenario analysis reveals that the primary causes of the discrepancies in results produced under the FTFG/FITF systems appear to be the new "publish behind" grace period/springing public disclosure exception and the derivative exception. In addition to the differences caused by these new exceptions themselves, the scenario-by-scenario analysis reveals that the interplay of the new definition of effectively filed, together with the use of provisional patent application filings (another feature of patent law that is relatively unique to the

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[81] *See infra* FIG. 7.

United States), can create different results than can be obtained under either an FTI or FTF system.[82]

As previously discussed, the "publish behind" grace period/springing public disclosure exception is an element of the FTFG/FITF systems without an equivalent in either the FTI or the FTF system.[83] Our analysis reveals that this new exception creates a number of scenarios where FTFG/FITF produce results wholly inconsistent with either FTI or FTF. For example, assume a scenario where Party A publicly discloses the invention and subsequently files a provisional application on subject matter that is later converted to a utility application.[84] Party B, the first inventor, also files a provisional application after Party A's public disclosure on the same subject matter and also converts the provisional into a utility application.[85] In this scenario, Party A independently invented the subject matter of the claimed invention and did not derive the public disclosure from Party B.

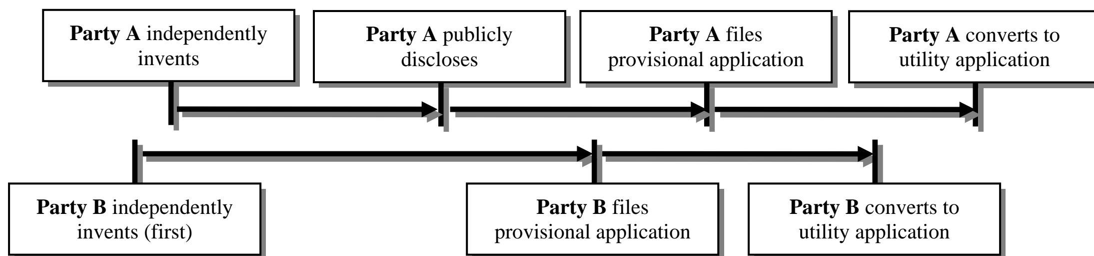

FIG. 8 – Different outcomes due to springing public disclosure exception

Under the current FTI system, Party B would be entitled to the patent provided Party A's public disclosure occurred within one year of the filing date of Party B's provisional application. In contrast, under an FTF system, neither party would be entitled to the patent as Party A's public disclosure violates the absolute novelty standard and precludes either party from obtaining a patent on the subject matter. Unlike both FTI and FTF, the "publish behind" grace period/springing public disclosure exception under the proposed FTFG/FITF systems would award the patent to Party A who, while publicly disclosing the subject matter first, was both second to invent the subject matter of the invention and second to file a

[82] This MATRIX analysis does not consider the potential implications of the recently published regulations that could extend the "pendency" of provisional applications from 12 months up to 24 months. *See* Request for Comments on Proposed Change to Missing Parts Practice, 75 Fed. Reg. 16,750 (Apr. 2, 2010).

[83] *See supra* Part III.A.2.

[84] *See infra* FIG. 8

[85] *Id.*

patent application. In this fact pattern, the "publish behind" grace period/springing public disclosure exception allows second inventors who file second but publish first to be awarded a patent over a party who not only was the first inventor, but also was the first party to file a patent application. This result seemingly conflicts with the underlying principles of both the FTI and FTF systems, and highlights a potentially undesirable consequence of the proposed FTFG/FITF systems.

Finally, while many details of the new derivation proceedings have yet to be fully articulated, even with current information it is clear that the proposed derivation proceedings deviate from the nearest equivalents under the FTI and FTF. The language of the new derivation proceedings grants broad license to applicants to claim derivation against virtually all parties, including "innocent" parties, who either directly or indirectly derive the subject matter of the invention from the applicant. To demonstrate the overall effect of derivation proceedings, the results under FTFG/FITF and FTF, absent a derivation claim, were plotted against the results of the same scenario with derivation being successfully claimed. Only the results produced by the proposed FTFG/FITF systems and the current FTF system were compared because the current FTI system uses interferences to resolve allegations of one inventor deriving an invention from another. The results revealed that the derivation proceedings in the proposed FTFG/FITF systems are significantly more likely to change the outcome of the scenarios than the equivalent proceeding under an FTF system.[86] A successful derivation proceeding under the originally proposed FITF changes the outcome of half of the scenarios in the majority of the subcategories.[87] In comparison, the non-prejudicial disclosure "bad actor" exception under most current FTF systems changes the outcome in only a third of the scenarios in some subcategories and has no effect on scenarios in other categories.[88] While FTFG more closely resembles FTF in the relative percentage of the outcome of scenarios changed by derivation proceedings, FTFG is still substantially more likely to change the outcome of scenarios than FTF, particularly in cases where both parties are making public disclosures.[89]

[86] *See infra* FIG. 9C.
[87] *See infra* FIG. 9A.
[88] *Id.*
[89] *See infra* FIG. 9B.

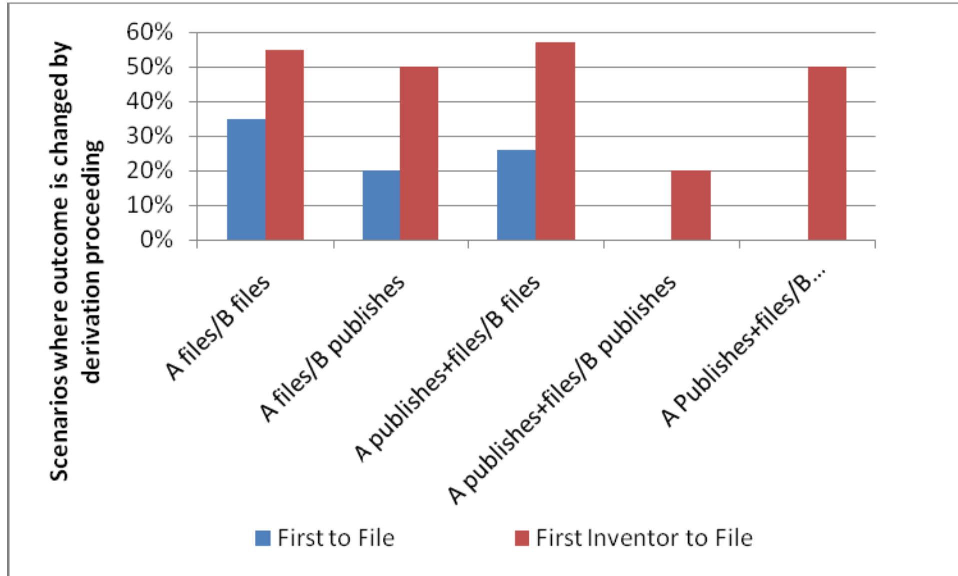

FIG. 9A – The effect of derivation proceedings (comparing FTF vs. FITF)

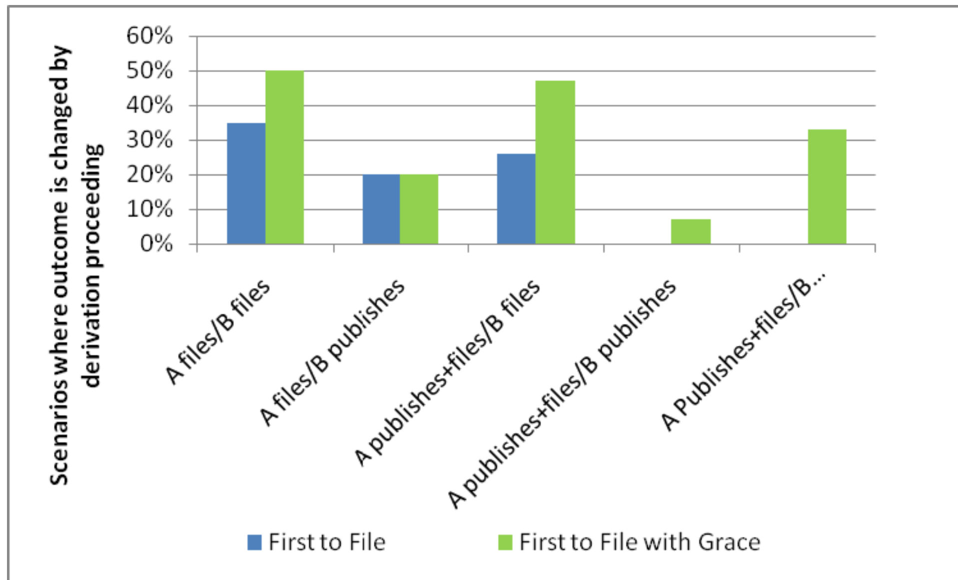

FIG. 9B – The effect of derivation proceedings (comparing FTF vs. FTFG)

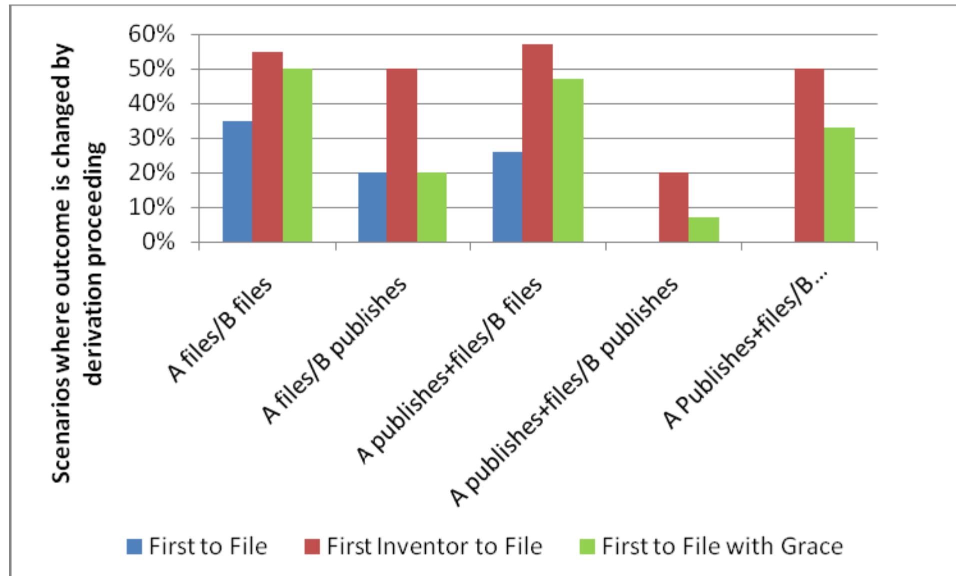

FIG. 9C – The effect of derivation proceedings (comparing FTF, FITF and FTFG)

An underlying cause of the increased effect of derivation proceedings on the outcome of scenarios is that the new derivation proceedings under the proposed FTFG/FITF systems appear to have a significantly greater applicability than the equivalent non-prejudicial disclosure exception under an FTF system. Specifically, the absolute novelty standard limits the applicability of the non-prejudicial disclosure exception in an FTF system, while the derivation proceedings under the proposed FTFG/FITF systems have no such limitation. Under the FTF system, the absolute novelty standard moots an applicant's claim that a third party made a non-prejudicial disclosure if the applicant has also publicly disclosed the subject matter. In contrast, the FTFG/FITF systems allow a party that has publicly disclosed the subject matter to remove a third party's prior filed application as prior art while still being entitled to the patent due to the lack of an absolute novelty standard under the FTFG/FITF systems.[90]

As the MATRIX analysis shows, the new public disclosure and derivation exceptions to prior art introduced under the FTFG/FITF systems cause the new systems to act more like an entirely new patent system rather than as a midway point between FTI and FTF. Furthermore, these exceptions are currently broadly defined in the proposed statutory language, thereby potentially exaggerating the

[90] In the current fact pattern, Party A may also assert the "publish behind" grace period/springing public disclosure exception to remove Party B's provisional application. However, the exception was not applied in this fact pattern to illustrate the derivation exception in the proposed FTFG/FITF system.

legal and public policy effects of these new exceptions until such time as courts have had an opportunity to weigh in on interpretation of the new statutory language.

B. Consequences of switching to FTFG

Certainly, there will be costs incurred in transitioning from the current FTI system to the proposed FTFG system. It is understood that any change in the innovation reward system will inherently create short-term transition costs, and that the measure of the desirability of changing from one system to another should be determined by whether the long-term benefits of making such a change outweigh the short-term transition costs.[91] Apart from the challenges that are presented in dealing with cases that bridge over the transition from the current FTI system to the proposed FTFG system,[92] the principal considerations in evaluating the desirability of changing systems would seem to involve the same factors that produce the differences in results that have been shown by the MATRIX experimental analysis.

1. "Publish behind" grace period exception

Regardless of whether the "publish behind" grace period exception accomplishes its purpose of preserving the concept of allowing earlier inventors to remove prior art similar to the current practice of swearing behind an earlier prior art reference, this new exception may have greater consequences than are initially apparent.[93]

While the "publish behind" grace period exception attempts to preserve the concept of allowing earlier inventors to remove prior art by swearing behind that art, it unintentionally creates a rift between the original systems and the proposed FTFG system by allowing subsequent inventors who file secondly to obtain the patent. The practice of swearing behind was originally intended to allow first inventors an opportunity to demonstrate that they were the actual first inventor and thus entitled to the patent.[94] However, the "publish behind" grace period exception provides the benefit of the exception to any party who is the first to publicly disclose, even if that party is not the first to invent. While this result is

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[91] Brad Pedersen & Vadim Braginsky, *The Rush to a First-to-File Patent System in the United States: Is a Globally Standardized Patent Reward System Really Beneficial to Patent Quality and Administrative Efficiency?* 7 MINN. J.L. SCI. & TECH. 757, 759 (2006).

[92] Section 17 of S. 515 currently provides that the transition would take effect for all patents issued one year after the bill is signed into law; however, the authors understand that the transition provisions of the bill are apparently still under review and subject to change. S. 515, 111th Cong. § 17 (2010).

[93] *See, e.g.,* Pedersen & Braginsky, *supra* note 90, at 758–59.

[94] *See* R. CARL MOY, MOY'S WALKER ON PATENTS § 8:133 (4th ed. 2009).

consistent with the assumption that FTFG represents a shift toward FTF, the "publish behind" grace period exception is at odds with the absolute novelty standard and the very concept of a first-to-file system by encouraging a race to public disclosure, rather than filing.[95] Under the "publish behind" grace period exception, if a party wins the race to publicly disclose, then that party can delay filing up to the end of the one-year grace period. Furthermore, the "publish behind" grace period exception allows a party that wins the public disclosure race to trump the application of another and obtain the patent, even if the public disclosure is made one day before the effective date of the application. The public policy ramifications of allowing parties to create these "publish behind" grace periods, which have the effect of not only removing prior art, but also trumping the applications of parties who opt to file first rather than publicly disclose must be considered.

The potential consequences of the "publish behind" grace period exception may be exaggerated by the ambiguity of the language in the proposed legislation. The "publish behind" grace period exception applies to any subject matter *disclosed* by the applicant.[96] There is no requirement that the "publish behind" grace period disclosure also be a disclosure of sufficient technical and teaching quality that it can meet the enablement standards of 35 U.S.C. § 112 (2006).[97] The only legislative requirement to invoke this new exception is that the disclosure be public. Consequently, under the "publish behind" grace period exception as proposed, an enabling patent application filed by the first party to file may be trumped by a non-enabling public disclosure made by a second party to file where that disclosure was prior to the effective filing date of the first party. Under the traditional patent *quid pro quo*, a party is rewarded with a temporary monopoly of the patented subject matter by providing an enabling disclosure of the invention to the public.[98] The "publish behind" grace period exception seemingly encourages a party to make an early, non-enabling disclosure to the public in order to pre-empt later filed patent applications that are enabling from being granted as patents.

In contrast to the potential negative consequences of this exception, the "publish behind" grace period exception could provide a positive boon to certain

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[95] *See* Margo A. Bagley, *The Need for Speed (and Grace): Issues in a First-Inventor-to-File World*, 23 BERKELEY TECH. L.J. 1035, 158–60 (2008) (discussing how the FITF and the one-year grace period do not operate together effectively).

[96] *See* S. 515, 111th Cong. § 2 (2010). Proposed changes to 35 U.S.C. § 102(b)(1)(A) (2006).

[97] *See* S. 515, 111th Cong. § 2 (2010) (absence of language requiring that the disclosure provide sufficient technical and teaching quality so that it meets the enablement requirement of section 112); *cf.* 35 U.S.C. § 112 (this section requires that the applicant for a patent to disclose enough information to enable another skilled in the art to create the claimed invention).

[98] 35 U.S.C. § 112.

classes of applicants that typically publicly disclose the subject matter before or very soon after the time they file for patent protection. For example, the "publish behind" grace period exception could provide significantly increased flexibility to educational institutions where the fruits of research are typically first disclosed to the public through publication in academic or scientific journals. The one-year grace period could allow these types of applicants the opportunity to obtain necessary funding. As in any consideration of the public policy implications, the potential positive consequences of the "publish behind" grace period exception must be considered against the potentially negative ramifications.

2. Derivation proceedings

The concept of derivation based on another's idea or invention is not new to intellectual property. Both trademark and copyright law have significant bodies of statutory and case law devoted to the concept.[99] Furthermore, many FTF systems provide recourse for parties to remove prior art created by parties who derived the subject matter from the applicant, such as the so-called "bad actor" non-prejudicial disclosure exception under the EPC.[100] The derivation proceedings as currently drafted under the proposed FTFG system appear to be applicable to a broader range of fact patterns and encompass a broader range of activities that may be considered derivation.

As previously discussed, the new derivation proceedings are far more likely to change the outcome of a broader range of fact patterns than the equivalent proceedings under the current FTF systems.[101] The lack of an absolute novelty standard under the FTFG system allows the derivation proceedings to be meaningfully applied to a greater number of scenarios. A likely direct consequence of providing derivation proceedings without an absolute novelty standard limitation may be that a higher number of derivation claims will be made as compared to the relatively small number of interferences that are declared under the current FTI system.[102] However, a more significant consequence of the proposed derivation proceedings is likely to be the type of actors caught within the purview of the proposed derivation proceedings.

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[99] *E.g.*, Robert J. Morrison, *Deriver's Licenses: An Argument for Establishing a Statutory License for Derivative Works*, 6 CHI. KENT J. INTELL. PROP. 87, 88–89 (2006).

[100] EPC, *supra* note 13, art. 55.

[101] *See supra* Part III.A.3; *supra* FIG. 9C.

[102] Through September of 2009, only fifty-five interferences have been declared in 2009. U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences Process Production Report, Fiscal Year 2009, http://www.uspto.gov/ip/boards/bpai/stats/process/fy2009.htm (last visited April 27, 2010). In 2008, only sixty-six interferences were declared. *Id.*

The types of actors falling within the scope of the derivation proceedings can be split into three broad categories: (1) "bad actors" who abuse a preexisting relationship with the inventor, (2) "innovators" who independently develop a new invention based on the inventor's own disclosure, and (3) parties who receive a non-confidential, yet non-public disclosure from the inventor. While not a direct result of the MATRIX analysis, the issue of whether Congress intends for all of these actors to fall under the derivation proceedings exception of prior art is inextricably linked to analyzing fact patterns involving any form of derivation.[103]

The most evident target of the proposed derivation proceedings are the "bad actors" who abuse a preexisting relationship with the inventor to make a public disclosure or file a patent application; for example, a party who enters into a confidentiality agreement with the inventor and breaches the agreement to make a public disclosure or file a patent application. As previously discussed, the "non-prejudicial disclosure" option available under the EPC system for FTF addresses the same type of scenario.[104] The derivation option for applicants to remove prior art created by another party with unclean hands is a logical alternative for applicants under the proposed FTFG system and current FTF systems where applicants cannot remove the prior art by showing an earlier invention date. Denying patents to applicants based on prior art created by a third party with unclean hands and potentially awarding the patent to the third party seems to run contrary to public policy. Even at the narrowest construction, the derivation proceedings of the proposed FTFG system do, and should, cover bad actors who abuse preexisting relationships with inventors to make derived disclosures.

While bad actors are clearly targets of any derivation option under the proposed FTFG system, the proposed derivation proceedings as currently drafted also appear to encompass the activities of "innocent" parties. Specifically, the proposed derivation proceedings may cover innovators who derive a new invention from the inventor's own public disclosure. Under the FTF system articulated in the EPC, derivation can only be successfully claimed if the deriving party had a preexisting relationship with the inventor and abused that relationship to create the derived disclosure.[105] Furthermore, the absolute novelty standard renders a party's derivation claim moot if the party publicly discloses the subject matter. In other words, a third party is free to derive from a party's public disclosures as those public disclosures are now part of the prior art. In contrast, the derivation proceedings of the FTFG system do not require a preexisting relationship and apparently can occur between unrelated parties. Similarly, the lack of an absolute novelty standard allows applicants to publicly disclose the

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[103] *See* Interview with Robert A. Armitage, *supra* note 44.

[104] *See supra* Part III.A.3.

[105] *See* EPC, *supra* note 13.

subject matter of their inventions during the one-year grace period. This potentially grants applicants who publicly disclose, the ability to assert derivation against any party who subsequently files an invention at least partially based on the applicant's public disclosure.

Essentially, the derivation proceeding allows potentially "innocent" parties to be captured within the scope of the derivation exception based on the use of the public disclosure of another invention. For example, Party A files a provisional application on an invention having elements 1, 2 and 3 and then publicly discloses the invention as filed.[106] Party B, upon seeing Party A's public disclosure, develops and files an application on an invention having elements 1, 2, 3 and 4.[107] Subsequently, Party A converts the provisional application to a utility, but adding an embodiment having elements 1, 2, 3 and 4.[108]

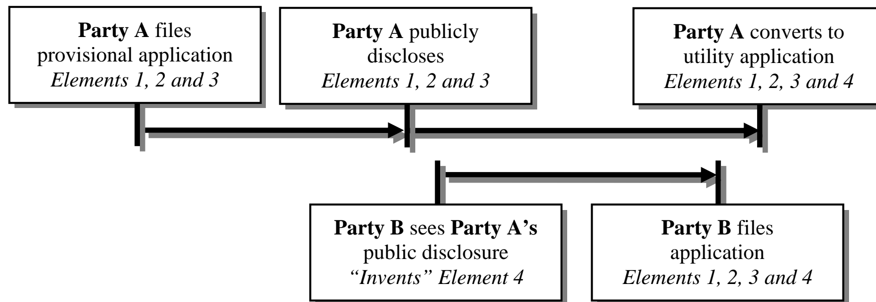

FIG. 10 – Derivation example

Under the derivation proceedings as currently proposed, Party A may be able to remove Party B's application by claiming Party B's application was directly or indirectly derived from Party A's public disclosure.[109] The issue is further complicated if Party B's invention of element 4 was non-obvious in view of Party A's disclosure. Current patent case law regarding derivation in the context of a patent interference would require Party A to prove that Party B obtained all four

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[106] *See infra* FIG. 10.
[107] *Id.*
[108] *Id.*
[109] The "publish behind" grace period exception may not apply in this fact pattern as Party A only disclosed elements 1–3 and did not disclose element 4. Whether the language enacted for the "publish behind" grace period exception does, or does not, require similarity or identity of the claimed invention in order to invoke the exception will likely be the subject of discussion and litigation before that issue is resolved. For the sake of demonstrating the effect of the derivation proceeding, the "publish behind" grace period exception was presumed to not be applied in this situation.

elements from Party A;[110] however, the current broad statutory language defining derivation proceedings does not appear to exclude a derivation claim so long as a *di minimis* amount of the invention is based upon a public disclosure by another party. In other words, an "innocent" party who seeks a patent on an invention that it developed, in part, based on the prior art could not only be prevented from patenting the subject matter, as having allegedly improperly obtained/derived their invention from another, but the original inventor may then be able to patent the subject matter developed by that innocent party.

The application of derivation proceedings to parties who invent based on the disclosure of another is consistent with derivation concepts as applied under copyright or trademark law where any changes based on the underlying work may be considered a derivative work. However, unlike the subject matter protected by copyrights or trademarks, advancements in science and technology are virtually always advances based on the underlying work of another. As such, the apparent extension of derivation from copyright and trademark law to patent law may have the unintended consequence of stifling, rather than promoting, the progress of the useful arts. While it is unlikely courts would ultimately construe the provisions of the derivation proceeding as covering these kinds of fact patterns, the uncertainty and costs for those who may be forced to challenge the expected over-reaching use of the derivation proceedings in the meantime, will increase costs for applicants as a whole.

The final category encompassed by the proposed derivation proceedings is parties that act on non-confidential, yet non-public disclosures by the inventor. For example, companies often receive disclosures of inventions, where the disclosure is not protected by a confidentiality agreement, but is not disclosed to the public at large. A company acting on such a disclosure is not a *per se* "bad actor" as there is no confidentiality agreement that is abused. In addition, the company may be innocent as inventing a non-obvious advancement over the disclosed invention.[111] While only affecting a relatively narrow subset of patent applicants, the implications of putting such activities under the purview of derivation proceedings could be significant and broad ranging. As such, the scope of the proposed derivation proceedings must be carefully considered to determine

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[110] "In order to establish derivation, the Junior party must show (1) prior, complete conception of the claimed subject matter and (2) communication of the complete conception to [Senior Party]." Christ v. Blake, Pat. Interference No. 103,435, 1999 WL 33446702, at *5 (B.P.A.I. 1999) (citing Hedgewick v. Akers, 497 F.2d 905, 908 (C.C.P.A. 1974)).

[111] It is common practice for companies to return without opening such disclosures in order to avoid the legal consequences of being aware of an idea from an outside inventor. Other companies refuse to have any dealings with an inventor until the inventor has an issued patent.

if this type of fact pattern properly belongs under the derivation proceedings or is better regulated elsewhere.

A potential solution to any overbroad applicability and effect of the derivation proceedings under the FTFG system would be to narrow the scope of derivation proceedings to cases of "bad actor" misappropriation. In other words, limit derivation proceedings to cases where the deriving party improperly gained access to or used the subject matter to create the deriving disclosure. Narrowing the scope of derivation proceedings would reduce or eliminate many of the public policy considerations created.[112] In any case, the intended scope of the derivation proceedings in the proposed FTFG system should be addressed and more clearly defined before the FTFG system is implemented.

3. Complexity of the "effectively filed" requirement

An additional consideration that was raised in conducting the analysis of the MATRIX is the potential consequences of the new "effectively filed" requirement for prior filed applications to serve as prior art. The proposed requirement purports to maintain the rule under the current FTF system that subsequently filed applications claiming priority to an enabling parent application or patent are prior art against applications filed after the parent application or patent.[113] However, the proposed FTFG system expands the definition of prior art to allow any subject matter disclosed in the application, including subject matter not claimed in the application, to be back-dated to the first time the subject matter is described in the earlier application.

The "effectively filed" definition follows a recent line of cases holding that patents are prior art for all they teach and expands the current definition of prior art beyond the described invention to include any subject matter disclosed in the application.[114] As directed at subject matter and not the invention, the description of the subject matter in the earlier application is not subject to the 35 U.S.C. § 112 (2006) enablement requirements. While the claimed invention of the subsequent application must be enabled by the prior application,[115] the unclaimed subject

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[112] Proposed changes to 35 U.S.C. § 135 (2006); S. 515, 111th Cong. § 2 (2010) (setting forth the process for instituting a derivation proceeding and the following administrative procedures).

[113] 35 U.S.C. § 102(e).

[114] Symbol Technologies v. Opticon, Inc., 935 F.2d 1569, 1578 (Fed. Cir. 1991) (reference that lacks any description of how to make and use may qualify as prior art for determining obviousness); *see, e.g.,* Beckman Instruments, Inc. v. LKB Produkter AB, 892 F.2d 1547, 1551 (Fed. Cir. 1989) (stating that "even if a reference discloses an inoperative device, it is prior art for all that it teaches").

[115] MANUAL OF PATENT EXAMINING PROCEDURES § 706.02(b) (2008). A rejection based on 35 U.S.C. § 102(b) can be overcome by: …perfecting benefit under 35 U.S.C. § 120… by amending the specification of the application to contain a specific reference to a prior

matter does not necessarily have to be enabled by the prior disclosure in order to be backdated to the earlier date. The statute as currently drafted does not place any explicit enablement requirements on the subject matter description. The lack of an enablement requirement for backdating described subject matter allows the disclosures of subsequently filed applications to be tailored to create prior art, for prior filed applications, by backdating the subject matter of the subsequent application to an earlier priority application that only provides a non-enabling description of the subject matter.

The effectively filed definition of prior art allows applicants to potentially use priority applications with broad disclosures as means of offensively creating prior art. For example, Party A files a provisional application, generally disclosing a genus and claims species 1 of that genus with sufficient enabling disclosure of species 1.[116] Party B then files an application directed at species 2 of the genus and then publicly discloses species 2.[117] Party A then converts the provisional application to a utility application that claims species 1, and also includes a description of species 2.[118]

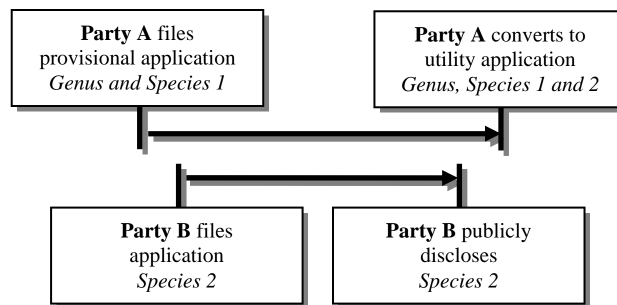

FIG. 11 – Effectively filed example

In this scenario, Party A can claim priority from the utility application to the provisional application based on the enabling disclosure of species 1. Under the proposed FTFG definition of "effectively filed,"[119] the disclosure in Party A's utility application of species 2 is effectively filed as of the filing date of Party A's provisional application that describes the genus. The description of the genus may logically be construed to generally describe species 2 and support backdating the disclosure to filing of the provisional application, thereby creating prior art for

application… and by establishing that the prior application satisfies the enablement and written description requirements of 35 U.S.C. § 112, first paragraph. *Id.*

[116] *See infra* FIG. 11.

[117] *Id.*

[118] *Id.*

[119] Proposed changes to 35 U.S.C. § 100(i)(1); S. 515, 111th Cong. § 2 (2010).

Party B's application. Under the "effectively filed" definition, an applicant with a non-enabling disclosure in a priority application can use an otherwise non-enabling disclosure to create prior art that may prevent third parties from obtaining patents on subject matter, even after those third parties have already filed their own patent applications. While current case law of genus/species enablement has been well developed, particularly in the field of biotechnology, the language of the statutory provisions in the proposed § 102 will undoubtedly cause parties to re-litigate these issues under the proposed FTFG system. The potential ramifications of how prior art patent applications might be used offensively in this manner should be considered in evaluating the proposed FTFG system.

IV. CONCLUSION

The proposed FTFG system of the Patent Reform Act of 2010 represents a new system of patent law not previously seen before. While premised as a middle step on the road to harmonization, the proposed FTFG system is in many ways a unique patent law system rather than a true compromise between the current FTI and FTF systems.[120] The proposed FTFG system creates incentives for patent applicants not present under either of the existing systems, such as prior art advantages for early public disclosures. Similarly, the proposed FTFG system introduces new exceptions for patent applicants that grant broad license to defeat prior art and applications of other parties by providing "publish behind" grace period and derivation exceptions for prior art.

The implementation of any new legal system is inherently wrought with challenges and unintended consequences. The proposed FTFG system is no exception. Apart from the consequences of the new and unique features of the proposed FTFG system, its core elements contain complexities that are certain to temporarily increase the overhead costs of transitioning to the proposed system. Regardless of whether one agrees or disagrees with the legal and public policy issues behind these new incentives and exceptions, the proposed FTFG system

[120] Whether harmonization of the existing FTI and FTF patent systems is actually needed to accomplish the objectives of work sharing among the various patent office's is a question beyond the scope of this article. However, this question should be considered in the context of evaluating the desirability of the proposed Patent Reform legislation. Clearly, search work done by the US Patent Office under its FTI system is "shareable" with other FTF patent offices. So, the problem of harmonization for purposes of work sharing is actually a one-way problem in which it would be helpful to understand how many times the search results of patent offices with FTF systems identify and apply prior art that would otherwise not be useable under the grace period exceptions of the current FTI system.

should not be blindly accepted as a midway compromise point between the existing FTI and FTF patent systems.[121]

[121] Ultimately, Congress will determine whether the overhead costs of transitioning to the proposed FTFG system are worthwhile.

The Matrix for Changing First-To-Invent
A Publishes-Files, B Publishes-Files

Scenario Number	Scenario	Order of Invention	Public disclosure		Provisional Application			Non-Provisional Application					Derivation Claim	Current Law (First to Invent)	New Law (First Inventor to File)	New Law 2 (First to File with Grace)	European Law (First to File)	FTI v. FITF	FTF v. FITF	FTI v. FTF
			Publicly disclosed	Timing	Filed	Meets §112	Timing	Meets §112	Claimed	Published	Issued	Timing								
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	B invents before A	Yes Yes	B discloses before A	Yes Yes	Yes Yes	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	No	Patent granted to B as B invented prior to A making B's public disclosure 102(a) prior art to A	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(A) unless A's disclsoure is 102(a)(1)(A) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Same	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	B invents before A	Yes Yes	B discloses before A	Yes Yes	Yes No	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	No	Patent granted to B as B invented prior to A making B's public disclosure 102(a) prior art to A	Patent granted to B as A's public disclosure and prov are not prior art under 102(b)(1)(A)/(b)(2)(B)	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Same	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	B invents before A	Yes Yes	B discloses before A	Yes Yes	Yes Yes	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	Yes	Patent granted to B as B invented prior to A making B's public disclosure is 102(a) prior art to A	**Irrelevant** - Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(A) unless 102(a)(1)(A) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B) regardless if A derived	B cannot claim prejudicial disclosure by A under Art. 55 as B also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	B invents before A	Yes Yes	B discloses before A	Yes Yes	Yes No	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	Yes	Patent granted to B as B invented prior to A making B's public disclosure is 102(a) prior art to A	**Irrelevant** - Patent always granted to B as A's public disclosure and prov are not prior art under 102(b)(1)(A)/(b)(2)(B)	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B) regardless if A derived	B cannot claim prejudicial disclosure by A under Art. 55 as B also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	A invents before B	Yes Yes	B discloses before A	Yes Yes	Yes Yes	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	No	Patent granted to A as A invented prior to B unless B's public disclosure or prov constituted 102(b) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(A) unless disclosure is 102(a)(1)(A) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Different	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	A invents before B	Yes Yes	B discloses before A	Yes Yes	Yes No	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	No	Patent granted to A as A invented prior to B unless B's public disclosure 102(b) prior art	Patent granted to B as A's public disclosure and prov are not prior art under 102(b)(1)(A)/(b)(2)(B)	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Different	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	A invents before B	Yes Yes	B discloses before A	Yes Yes	Yes Yes	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	Yes	Patent granted to A as A invented prior to B unless B's public disclosure or prov constituted 102(b) prior art	Patent granted to A if A can show that B's public disclosure falls under 102(b)(1)(A) exception and is not 102(a)(1)(A) art	Patent granted to A if A can show that B's public disclosure was derived under 102(b)(1)(A)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same	Different	Different
1*	A (1) publicly discloses, (2) files a prov (less than 1 year after B's disclosure), (3) which is subsequently converted to a utility B (1) publicly discloses before A publicly discloses, (2) subsequently files a provisional application, (3) which is coverted into a utility application	A invents before B	Yes Yes	B discloses before A	Yes Yes	Yes No	A files prov after B discloses	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B discloses	Yes	Patent granted to A as A invented prior to B unless B's public disclosure 102(b) prior art	Patent granted to A if A can show that B's public disclosure falls under 102(b)(1)(A) exception and is not 102(a)(1)(A) art	Patent granted to A if A can show that B's public disclosure was derived under 102(b)(1)(A)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same	Different	Different
2*	A (1) publicly discloses, (2) files a non-prov B (1) publicly discloses before A publicly discloses, (2) files a non-prov after A publicly discloses	B invents before A	Yes Yes	B discloses before A	No No	N/A N/A	**Neither A nor B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	B files util after A discloses	No	Patent granted to B invented prior to A making B's public disclosure is 102(a) prior art to A	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(A) unless 102(a)(1)(A) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Same	Different	Different
2*	A (1) publicly discloses, (2) files a non-prov B (1) publicly discloses before A publicly discloses, (2) files a non-prov after A publicly discloses	B invents before A	Yes Yes	B discloses before A	No No	N/A N/A	**Neither A nor B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	B files util after A discloses	Yes	Patent granted to B invented prior to A making B's public disclosure is 102(a) prior art to A	**Irrelevant** - Patent granted to B regardless as A's public disclosure is not prior art under 102(b)(1)(A) unless 102(a)(1)(A) prior art	Patent granted to B regardless as A's public disclosure is not prior art regardless of whether A derived	B cannot claim prejudicial disclosure by A under Art. 55 as B also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
2*	A (1) publicly discloses, (2) files a non-prov B (1) publicly discloses before A publicly discloses, (2) files a non-prov after A publicly discloses	A invents before B	Yes Yes	B discloses before A	No No	N/A N/A	**Neither A nor B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	B files util after A discloses	No	Patent granted to A as A invented prior to B unless B's public disclosure is 102(b) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(A) unless 102(a)(1)(A) prior art	Patent granted to B as A's public disclosure is not prior art under 102(b)(1)(B)	Neither A nor B receives patent due to A or B's public disclosure under Art. 54(2)	Different	Different	Different

2*	A (1) publicly discloses, (2) files a non-prov	**A invents before B**	Yes	B discloses before A	No	N/A	**Neither A nor B files prov**	Yes	Yes	Yes	??	B files util after A discloses	Yes	Patent granted to A as A invented prior to B unless B's public disclosure is 102(b) prior art	Patent granted to A if A can show that B's public disclosure falls under 102(b)(1)(A) exception and is not 102(a)(1)(A) art	Patent granted to A if A can show that B's public disclosure was derived under 102(b)(1)(A)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same	Different	Different
	B (1) publicly discloses <u>before</u> A publicly discloses, (2) files a non-prov after A publicly discloses		Yes		No	N/A		Yes	Yes	Yes	??									

The Matrix for Changing First-To-Invent
A Publishes-Files, B Publishes Only

Scenario Number	Scenario	Order of Invention	Public disclosure		Provisional Application			Non-Proviational Application					Derivation Claim	Current Law (First to Invent)	New Law (First Inventor to File)	New Law 2 (First to File with Grace)	European Law (First to File)	FTI v. FITF	FTF v. FITF	FTI v. FTF
			Publicly disclosed	Timing	Filed	Meets §112	Timing	Meets §112	Claimed	Published	Issued	Timing								
1A	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	No N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	No	Patent not granted to A as invention by B under 102(a) was before invention by A	Patent not granted to A as B disc is prior art under *102(a)(1)(B)*	Patent not granted to A as A is not entitled to the exceptions under 102(b)(1)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Same	Same
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	No N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - A derived from B	Patent not granted to A as invention by B under 102(a) was before invention by A	**Irrelevant** - B does not need derivation claim against A (A doesn't get patent regardless)	Patent not granted to A as A is not entitled to the exceptions under 102(b)(1)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same (Irrelevant)	Same	Same
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	Yes N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	No	Patent not granted to A as invention by B under 102(a) was before invention by A	**Irrelevant** - B does not need to claim prior user rights against A (A doesn't get patent regardless)	Patent not granted to A as A is not entitled to the exceptions under 102(b)(1)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same (Irrelevant)	Same	Same
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	Yes N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - A derived from B	Patent not granted to A as invention by B under 102(a) was before invention by A	**Irrelevant** - B does not need to claim prior user rights against A (A doesn't get patent regardless)	Patent not granted to A as A is not entitled to the exceptions under 102(b)(1)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same (Irrelevant)	Same	Same
1C	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**A invents before B**	Yes Yes	B discloses before A	Yes N/A	No N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	No	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent not granted to A as B disc is prior art under *102(a)(1)(B)*	Patent not granted to A as A is not entitled to the exceptions under 102(b)(1)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Different	Same	Different
1F	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X less than 1 year before A's public disclosure	**A invents before B**	Yes Yes	B discloses before A	Yes N/A	Yes N/A	**A files prov after B discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A only if A proves under *102(b)(2)(B)* that B disc was obtained directly or indirectly from A	Patent granted to A if A proves pursuant to 102(b)(1)(A) that B disc was derived from A	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Maybe Different	Different	Different
2A	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**B invents before A**	Yes Yes	A discloses after B	Yes N/A	No N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a) before invention by A	Patent granted to A as B disclosure is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**B invents before A**	Yes Yes	A discloses before B	Yes N/A	Yes N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - A derived from B	Patent likely granted to A but may be invalid due to earlier invention by B under 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc - No apparent option for B to invalidate	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Maybe Different	Different	Different
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	No N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a) before invention by A	While A obtains patent B will have prior user rights under 283	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Maybe Different	Different	Different
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**B invents before A**	Yes Yes	B discloses before A	Yes N/A	Yes N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - A derived from B	Patent likely granted to A but may be invalid due to earlier invention by B under 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc although B has prior user rights under 283	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Maybe Different	Different	Different
2C	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**A invents before B**	Yes Yes	A discloses before B	Yes N/A	No N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	N/A	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A as B disclosure is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different

2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure but before A's provisional application is filed	**A invents before B**	Yes Yes	A discloses before B	Yes N/A	Yes N/A	A files prov after B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B discloses**	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	**Irrelvant** - B does not need derivation claim against A (A obtains patent regardless)	Patent granted to A pursuant to the exception in 102(b)(1)(B)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
3A	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses after B**	Yes N/A	No N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3B	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	Yes N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as B discl is not prior art under 102(b)	Patent granted to A as A is entitled to effective filing date of A prov before B disc	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	No N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - A derived from B	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a) - although may be invalid under 102(f)	Patent granted to A as B disc is exception under *102(b)(1)* - No apparent option for B to invalidate	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	Yes N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - A derived from B	Patent granted to A as B discl is not prior art under 102(b) - although may be invalid under 102(f)	Patent granted to A as A is entitled to effective filing date of A prov before B disc - No apparent option for B to invalidate	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	No N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	Yes N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as B discl is not prior art under 102(b)	Patent granted to A as A is entitled to effective filing date of A prov before B disc	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	No N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - A derived from B	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a) - although B has prior user rights	Patent granted to A as B disc is exception under *102(b)(1)* - Although B has prior user rights	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**B invents before A**	Yes Yes	**A discloses before B**	Yes N/A	Yes N/A	A files prov before B discloses	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - A derived from B	Patent granted to A as B discl is not prior art under 102(b) - Although B has prior user rights	Patent granted to A as A is entitled to effective filing date of A prov before B disc - Although B has prior user rights	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to either A or B's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**A invents before B**	Yes Yes	**A discloses before B**	Yes N/A	No N/A	A files prov before B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as B discl is not prior art under 102(b)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	**A invents before B**	Yes Yes	**A discloses before B**	Yes N/A	Yes N/A	A files prov before B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as B discl is not prior art under 102(b)	Patent granted to A as A is entitled to effective filing date of A prov before B disc	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different

3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	No N/A	A files prov before B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	No	Patent granted to A as B discl is not prior art under 102(b)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	No N/A	A files prov before B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	**Irrelevant** - A does not need derivation claim against B (A obtains patent regardless)	Patent granted to A pursuant to the exception in 102(b)(1)(B)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's public disclosure and provisional application is filed but before A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	Yes N/A	A files prov before B discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	**Irrelevant** - B does not need derivation claim against A (A obtains patent regardless)	Patent granted to A pursuant to the exception in 102(b)(1)(B)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
4A	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) publicly discloses X after A's utility application is filed	B invents before A	Yes Yes	A discloses before B	Yes N/A	No N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
4B	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	B invents before A	Yes Yes	A discloses before B	Yes N/A	Yes N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	No	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	Patent granted to A as A is entitled to effective filing date of A util before B disc	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
4C	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	B invents before A	Yes Yes	A discloses before B	Yes N/A	No N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	Yes - A derived from B	Patent likely granted to A but may be invalid due to earlier invention by B under 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc - No apparent option for B to invalidate	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Maybe Different	Different	Different
4D	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	B invents before A	Yes Yes	A discloses before B	Yes N/A	Yes N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	Yes - A derived from B	Patent likely granted to A but may be invalid due to earlier invention by B under 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc - No apparent option for B to invalidate	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Maybe Different	Different	Different
4E	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	No N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	No	Patent likely granted to A but may be invalid due to earlier invention by B under 102(a) or 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc - No apparent option for B to invalidate	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
4F	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	Yes N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	No	Patent likely granted to A but may be invalid due to earlier invention by B under 102(a) or 102(f)	Patent granted to A as A is entitled to effective filing date of A util before B disc - No apparent option for B to invalidate	Patent granted A as B's disc is not prior art under 102(a)(1)	Patent not granted to A due to A's public disclosure under Art. 54(2)	Same	Different	Different
4*	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	No N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	Yes - B derived from A	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	**Irrelvant** - A does not need derivation claim against B (A obtains patent regardless)	Patent granted A as B's disc is not prior art under 102(a)(1)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different
4*	A publicly discloses Invention X then files a provisional that is converted to a utility application that is published B: (1) publicly discloses X after A's utility application is filed	A invents before B	Yes Yes	A discloses before B	Yes N/A	Yes N/A	**A files prov before B discloses**	**Yes** N/A	Yes N/A	Yes N/A	?? N/A	A files util before B discloses	Yes - B derived from A	Patent granted to A as earlier invention by B not publicly disclosed or used under 102(a)	**Irrelvant** - A does not need derivation claim against B (A obtains patent regardless)	Patent granted A as B's disc is not prior art under 102(a)(1)	A cannot claim prejudicial disclosure by A under Art. 55 as A also publicly disclosed prior to filing	Same (Irrelevant)	Different	Different

The Matrix for Changing First-To-Invent
A Publishes-Files, B Files Only

Scenario Number	Scenario	Order of Invention	Public disclosure: Publicly disclosed	Public disclosure: Timing	Provisional Application: Filed	Provisional Application: Meets §112	Provisional Application: Timing	Non-Proviational Application: Meets §112	Non-Proviational Application: Claimed	Non-Proviational Application: Published	Non-Proviational Application: Issued	Non-Proviational Application: Timing	Derivation Claim	Current Law (First to Invent)	New Law (First Inventor to File)	New Law 2 (First to File with Grace)	European Law (First to File)	FTI v. FITF	FTF v. FITF	FTI v. FTF
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	No	Patent granted to B as B can claim priority to the prov under 102(e)	Patent granted to B under 102(a)(2) and 102(b)(4)(B)	Patent granted to B under 102(a)(2) pursuant to 101(i)(1)(B)	Patent is granted to B under Art. 54(1) as A's disclosure comes after B's effective filing	Same	Same	Same
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B prov	No	Patent granted to B as B's prov is 102(e) prior art to A, unless A's public disclosure is more than 1 year before B's util	Neither A nor B are entitled to the patent as B's prov and A's public disclosure serve as 102(a)(1)(B) prior art	Patent granted to B under 102(a)(1) pursuant to the exception in 102(b)(2)(B)	Neither B nor A is entitled to the patent due to A's public disclosure under Art. 54(2) and B's lack of priority	Maybe different	Same	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	No		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	Yes - A derived from B	Patent granted to B as B can claim priority to the prov under 102(e)	**Irrelevant** - Patent is granted to B under 102(a)(2) and 102(b)(4)(B) regardless of whether A derived	Patent granted to B under 102(a)(2) pursuant to 101(i)(1)(B)	Patent is granted to B under Art. 54(1) as A's disclosure comes after B's effective filing	Same (Irrelevant)	Same	Same
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B prov	Yes - A derived from B	Patent granted to B as B's prov is 102(e) prior art to A, unless A's public disclosure is more than 1 year before B's util	Patent granted to B under 102(b)(2)(A) if B can show that A derived from B	Patent granted to B under 102(a)(1) pursuant to the exceptions in 102(b)(2)(A) or (B)	Neither B nor A receives patent even if B proves prejudicial disclosure under Art. 55 as B disclosed (bad prov)	Maybe different	Different	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	No		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	No	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent granted to B under 102(a)(2) and 102(b)(4)(B)	Patent granted to B under 102(a)(2) pursuant to 101(i)(1)(B)	Patent is granted to B under Art. 54(1) as A's disclosure comes after B's effective filing	Different	Same	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B prov	No	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Neither A nor B are entitled to the patent as B's prov and A's public disclosure serve as 102(a)(1)(B) prior art	Patent granted to B under 102(a)(1) pursuant to the exception in 102(b)(2)(B)	Neither B nor A is entitled to the patent due to A's public disclosure under Art. 54(2) and B's lack of priority	Different	Same	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	No		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	Yes - B derived from A	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent is granted to A under 102(b)(2)(A)	Patent granted to A pursuant to the exception in 102(b)(2)(A)	Neither B nor A receives patent even if A proves prejudicial disclosure under Art. 55 as A has disclosed before filing	Same	Different	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
1*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B prov	Yes - B derived from A	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent is granted to A under 102(b)(2)(A)	Patent granted to A pursuant to the exception in 102(b)(1)(A)	Neither B nor A receives patent even if A proves prejudicial disclosure under Art. 55 as A has disclosed before filing	Same	Different	Different
	B: (1) files a provisional application before A publicly discloses that is converted into a non-provisional application after A files prov		No		Yes	No		Yes	Yes	Yes	??									
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses before B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	No	Neither A nor B is entitled to Patent as A's public disclosure is 102(b) prior art to A and B	Neither A nor B is entitled to the patent as A's public disclosure is 102(a)(1)(A) prior art	Neither A nor B is entitled to the patent as A's public disclosure is prior art not entitled to any exception under 102(b)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Same	Same
	B: (1) files a provisional application more than 1 year after A publicly discloses but before A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	B invents before A	Yes	A publicly discloses before B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B files prov	Yes - A derived from B	Neither A nor B is entitled to Patent as A's public disclosure is 102(b) prior art to A and B	Neither A nor B is entitled to the patent as A's public disclosure is 102(a)(1)(A) prior art	Neither A nor B is entitled to the patent as A's public disclosure is prior art not entitled to any exception under 102(b)	Neither A nor B is entitled to the patent due to A's disclosure under Art. 54(2) and B's prov exceeds Art. 55 6 months window	Same	Same	Same
	B: (1) files a provisional application more than 1 year after A publicly discloses but before A files prov		No		Yes	Yes		Yes	Yes	Yes	??									
2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application	A invents before B	Yes	A publicly discloses before B files prov	Yes	Yes	A files prov after B files prov	Yes	Yes	Yes	??	A files util after B prov	No	Neither A nor B is entitled to Patent as A's public disclosure is 102(b) prior art to A and B	Neither A nor B is entitled to the patent as A's public disclosure is 102(a)(1)(A) prior art	Neither A nor B is entitled to the patent as A's public disclosure is prior art not entitled to any exception under 102(b)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Same	Same
	B: (1) files a provisional application more than 1 year after A publicly discloses but before A files prov		No		Yes	Yes		Yes	Yes	Yes	??									

2*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application more than 1 year after A publicly discloses but before A files prov	B invents before A	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - B derived from A	Neither A nor B is entitled to Patent as A's public disclosure is 102(b) prior art to A and B	Neither A nor B is entitled to the patent as A's public disclosure is 102(a)(1)(A) prior art	Neither A nor B is entitled to the patent as A's public disclosure is prior art not entitled to any exception under 102(b)	Neither A nor B is entitled to the patent as A cannot use Art. 55 as having publicly disclosed udner Art. 54(2)	Same	Same	Same
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent granted to B if B can prove invention prior to A's public disclosure	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A pursuant to the exception to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	No	Patent granted to B if B can prove invention prior to A's public disclosure and A's disclosure is not 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B if B can prove invention prior to A's public disclosure	Patent granted to B under exception in 102(a)(1)(B), B's prov serves as 102(a)(1)(B) prior art to A	Patent granted to B pursuant to the exception 102(b)(2)(B) if B can prove A's public disclosure is derived from B	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - A derived from B	Patent granted to B if B can prove invention prior to A's public disclosure and A's disclosure is not 102(b) prior art	Patent granted to B under exception in 102(a)(1)(B), B's prov serves as 102(a)(1)(B) prior art to A	Patent granted to B pursuant to the exception 102(b)(1)(B) if B can prove A's public disclosure is derived from B	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2) and B's disclosure (bad prov)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent is granted to A unless B's prov is 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A pursuant to the exception to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	No	Patent is granted to A unless B's prov is 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A pursuant to the exception in 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - B derived from A	Patent is granted to A unless B's prov is 102(b) prior art	Patent is granted to A under 102(B)(2)(B)	Patent granted to A pursuant to 102(a)(1) pursuant to the exception in 102(b)(2)(B)	Neither A nor B is entitled to the patent as A cannot use Art. 55 as having publicly disclosed udner Art. 54(2)	Same	Different	Different
3*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application less than 1 year after A publicly discloses but before A files prov	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - B derived from A	Patent is granted to A unless B's prov is 102(b) prior art	Patent granted to A under exception in 102(a)(1)(B)	Patent granted to A pursuant to 102(a)(1) pursuant to the exception in 102(b)(1)(B)	Neither A nor B is entitled to the patent as A cannot use Art. 55 as having publicly disclosed udner Art. 54(2)	Same	Different	Different
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent granted to B unless A's public disclosure or provisional application is 102(b) prior art	Patent granted to A under 102(a)(2)	Patent granted to A under 102(a)(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Different	Different
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	No	Patent granted to B unless A's public disclosure or provisional application is 102(b) prior art	Patent granted to A regardless of whether B claims priority to prov	Patent granted to A under 102(a)(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Different	Different

4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B unless A's public disclosure or provisional application is 102(b) prior art	Patent granted to B under 102(b)(2)(A), provided disclosure is not 102(a)(1)(A) art	Patent granted to B under 102(b)(1)(A) and 102(b)(2)(B) if B can prove A derived	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Maybe different	Same	Same
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	**B invents before A**	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - A derived from B	Patent granted to B unless A's public disclosure or provisional application is 102(b) prior art	Patent granted to B under 102(a)(1)(B) exception unless either prov or disclosure is not 102(a)(1)(A) art	Patent granted to B under 102(b)(1)(A) and if B can prove A derived	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Maybe different	Same	Same
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent granted to A provided A's public disclosure is not 102(a) prior art	Patent granted to A under 102(a)(2)	Patent granted to A under 102(a)(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Different	Different
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	No	Patent granted to A provided A's public disclosure is not 102(a) prior art	**Irrelevant** - Patent is granted to A under 102(a)(2) regardless of whether B attains priority or not	Patent granted to A under 102(a)(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same (Irrelvant)	Different	Different
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes Yes	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - B derived from A	Patent granted to A provided A's public disclosure is not 102(a) prior art	**Irrelevant** - Patent is granted to A under 102(a)(2) regardless of whether B derives or not	Patent granted to A under 102(a)(2) regardless of whether B derived from A	Neither A nor B is entitled to the patent due to A's disclosure under Art. 54(2) that prevents use of Art. 55	Same (Irrelvant)	Different	Different
4*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a provisional application after A files prov application which is converted to a non-provisional application	A invents before B	Yes No	A publicly discloses before B files prov	Yes Yes	Yes No	**A files prov before B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - B derived from A	Patent granted to A provided A's public disclosure is not 102(a) prior art	**Irrelevant** - Patent is granted to A under 102(a)(2) regardless of whether B derives or not	Patent granted to A under 102(a)(2) regardless of whether B derived from A	Neither A nor B is entitled to the patent due to A's disclosure under Art. 54(2) that prevents use of Art. 55	Same (Irrelvant)	Different	Different
5*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application before A publically discloses	**B invents before A**	Yes No	A publicly discloses after B files util	Yes No	Yes N/A	**A files prov after B files util**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B as B's filing is 102(e) prior art to A	Patent granted to B under 102(a)(2)	Patent granted to B under 102(a)(2) pursuant to 101(1)(A)	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Same	Same	Same
5*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application before A publically discloses	**B invents before A**	Yes No	A publicly discloses after B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B as B's filing is 102(e) prior art to A	**Irrelevant** - Patent granted to B regardless of whether A derived from B	Patent granted to B under 102(a)(2) regardless of whether A derived from B	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Same (Irrelvant)	Same	Same
5*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application before A publically discloses	A invents before B	Yes No	A publicly discloses after B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	No	Patent granted to A as A invented prior to B's prov, provided B's util or A's disclosure is not 102(b) prior art	Patent granted to B under 102(a)(2)	Patent granted to B under 102(a)(2) pursuant to 101(1)(A)	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Different	Same	Different
5*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application before A publically discloses	A invents before B	Yes No	A publicly discloses after B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B prov**	Yes - B derived from A	Patent granted to A as A invented prior to B's prov, provided B's util or A's disclosure is not 102(b) prior art	Patent granted to A under 102(b)(2)(A)	Patent granted to A under 102(a)(2) if A can prove B derived from A pursuant to 102(b)(2)(A)	Neither A nor B entitled to patent if A prove B's util violated Art. 55 and due to A's own disclosure	Same	Different	Different
6*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A publically discloses	**B invents before A**	Yes No	A publicly discloses before B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent granted to B provided A's public disclosure is not 102(b) prior art	Neither A nor B obtain the patent as A's disclosure and B's util is 102(b)(2)(A)/(B) prior art	Patent granted to A becauses A can remove B's application pursuant to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's disclosure under Art. 54(2) that prevents use of Art. 55	Different	Same	Different

6*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A publicly discloses	**B invents before A**	Yes No	A publicly discloses before B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B provided A's public disclosure is not 102(b) prior art	Patent granted to B under exception in 102(a)(1)(B)	Patent granted to B if B can show A derived pursuant to 102(b)(1)(A)	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Same	Same	Same
6*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A publicly discloses	A invents before B	Yes No	A publicly discloses before B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent granted to A provided A's public disclosure is not 102(b) prior art	Neither A nor B obtain the patent as A's disclosure and B's util is 102(b)(2)(A)/(B) prior art	Patent granted to A becauses A can remove B's application pursuant to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's disclosure under Art. 54(2) that prevents use of Art. 55	Different	Same	Different
6*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A publicly discloses	A invents before B	Yes No	A publicly discloses before B files util	Yes No	Yes N/A	**A files prov after B files prov**	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - B derived from A	Patent granted to A provided A's public disclosure is not 102(b) prior art	Patent granted to A under 102(b)(2)(A)/(B)	Patent granted to A becauses A can remove B's application pursuant to 102(b)(2)(B)	Neither A nor B is entitled to the patent even if A proves Art. 55 disclosure by B's disclosure due to A's disclosure	Same	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	**B invents before A**	Yes No	**A publicly discloses before B files util**	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B provided A's public disclosure or prov was not 102(b) prior art	Patent granted to A as A's public disc is 102(a)(1)(B) prior art to B and A's disc is <1 year before A's prov	Patent granted to A pursuant to 102(a)(1)/(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	**B invents before A**	Yes No	**A publicly discloses before B files util**	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	No	Patent granted to B provide A's public disclosure is not 102(b) prior art	Patent granted to A as B's filing is not prior art under 102(b)(2)(B) due to A's public disc	Patent granted to A pursuant 102(a)(1) and under the exception in 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	**B invents before A**	Yes No	**A publicly discloses before B files util**	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	Yes - A derived from B	Patent granted to B provided A's public disclosure or prov was not 102(b) prior art	Patent granted to A as A's public disc is 102(a)(1)(B) prior art to B and A's disc is <1 year before A's prov	Patent granted to B provided B can show A's disc and application are derived pursuant to 102(b)(1)(A) and 102(b)(2)(A)	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Different	Different	Same
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	**B invents before A**	Yes No	**A publicly discloses before B files util**	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	Yes - A derived from B	Patent granted to B provide A's public disclosure is not 102(b) prior art	Patent granted to A as B's filing is not prior art under 102(b)(2)(B) due to A's public disc	Patent granted to B provided B can show A's disc and application are derived pursuant to 102(b)(1)(A)	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Different	Different	Same
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	A invents before B	Yes No	**A publicly discloses before B files util**	Yes No	Yes N/A	A files prov before B files util	**Yes** Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A provided A's public disclosure was not filed more than 1 year before prov	Patent granted to A as A's public disc is 102(a)(1)(B) prior art to B and A's disc is <1 year before A's prov	Patent granted to A pursuant to 102(a)(1)/(2)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	A invents before B	Yes No	**A publicly discloses before B files util**	Yes No	No N/A	A files prov before B files util	**Yes** Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	No	Patent granted to A provide A's public disclosure is not 102(b) prior art	Patent granted to A as B's filing is not prior art under 102(b)(2)(B) due to A's public disc	Patent granted to A pursuant 102(a)(1) and under the exception in 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	A invents before B	Yes No	**A publicly discloses before B files util**	Yes No	Yes N/A	A files prov before B files util	**Yes** Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	Yes - B derived from A	Patent granted to A provided A's public disclosure was not filed more than 1 year before prov	Patent granted to A as A's public disc is 102(a)(1)(B) prior art to B and A's disc is <1 year before A's prov	Patent granted to A pursuant to 102(a)(1)/(2) regardless of whether B derived from A	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2) prior to B's prov	Same	Different	Different
7*	A: (1) publicly discloses X, subsequently (2) files a provisional application, which is later (3) converted to non-provisional application B: (1) files a non-provisional application after A files provisional application	A invents before B	Yes No	**A publicly discloses before B files util**	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B util**	Yes - B derived from A	Patent granted to A provide A's public disclosure is not 102(b) prior art	Patent granted to A as B's filing is not prior art under 102(b)(2)(B) due to A's public disc	Patent granted to A pursuant 102(a)(1) and under the exception in 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2) prior to B's prov	Same	Different	Different

9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	No	Patent granted to B as B can claim priority to the prov under 102(e)	Patent granted to B under 102(a)(2) and 102(b)(4)(B)	Patent granted to B under 102(a)(2)	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Same	Same	Same
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	Yes		Yes	Yes	Yes	??									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B util**	No	Patent granted to B as B's prov is 102(e) prior art to A, unless A's public disclosure is more than 1 year before B's util	Neither A nor B are entitled to the patent as B's prov serves as 102(a)(1)(B) prior art as well as A's public disclosure	Patent granted to B pursuant to the exception in 102(a)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure and B's disclosure (bad prov) under Art. 54(2)	Same	Same	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	No		Yes	Yes	Yes	??									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B can claim priority to the prov under 102(e)	**Irrelevant** - Patent is granted to B under 102(a)(2) and 102(b)(4)(B) regardless of whether A derived	Patent granted to B under 102(a)(2) regardless of whether A derived from B	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Same (Irrelvant)	Different	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	Yes		Yes	Yes	Yes	??									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B's prov is 102(e) prior art to A, unless A's public disclosure is more than 1 year before B's util	Patent granted to B under 102(b)(2)(A) if B can show that A derived from B	Patent granted to B pursuant to the exceptions in 102(a)(1)(A)/(B)	Neither A nor B is entitled to the patent due to A's public disclosure and B's inability to claim priority	Same	Different	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	No		Yes	Yes	Yes	??									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	No	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent granted to B under 102(a)(2) and 102(b)(4)(B)	Patent granted to B under 102(a)(2)	Patent granted to B under Art. 54(1) as B filed before A's disclosure	Different	Same	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	Yes		N/A	N/A	N/A	N/A									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	No	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Neither A nor B are entitled to the patent as B's prov and A's public disclosure serve as 102(a)(1)(B) prior art	Patent granted to B pursuant to the exception in 102(a)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure and B's disclosure (bad prov) under Art. 54(2)	Same	Same	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	No		N/A	N/A	N/A	N/A									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent is granted to A under 102(b)(2)(A)	Patent granted to A if A can show B derived pursuant to 102(a)(2)(A)	Neither A nor B is entitled to the patent and A is precluded from the patent as having disclosed under Art. 54(2)	Same	Different	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	Yes		N/A	N/A	N/A	N/A									
9*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses after B files prov	No	N/A	B files prov after A publicly discloses	Yes	Yes	Yes	??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented prior to B's prov, provided B's prov is not 102(b) prior art	Patent is granted to A under 102(b)(2)(A)	Patent granted to A if A can show B derived pursuant to 102(a)(1)(A)	Neither A nor B is entitled to the patent and A is precluded from the patent as having disclosed under Art. 54(2)	Same	Different	Different
	B: (1) files a provisional application before A publicly discloses which is subsequently converted to a non-provisional after disclosure		No		Yes	No		N/A	N/A	N/A	N/A									
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses before B files prov	No	N/A	B files prov before A files util	Yes	Yes	Yes	??	**A files util after B files prov**	No	Patent granted to B if B can prove invention prior to A's public disclosure	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A as A can remove B's application pursuant to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Same
	B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional		No		Yes	Yes		Yes	Yes	Yes	??									
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses before B files prov	No	N/A	B files prov before A files util	Yes	Yes	Yes	??	**A files util after B files prov**	No	Patent granted to B if B can prove invention prior to A's public disclosure and A's disclosure is not 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A as A can remove B's disclosure pursuant to 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Same
	B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional		No		Yes	No		Yes	Yes	Yes	??									
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	**B invents before A**	Yes	A publicly discloses before B files prov	No	N/A	B files prov before A files util	Yes	Yes	Yes	??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B if B can prove invention prior to A's public disclosure	Patent granted to B under exception in 102(a)(1)(B), B's prov serves as 102(a)(1)(B) prior art to A	Patent granted to B as B can remove A's public disclosure pursuant to 102(b)(1)(A)	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Same	Same	Same
	B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional		No		Yes	Yes		Yes	Yes	Yes	??									

The Matrix for Changing First-To-Invent
A Publishes-Files, B Files Only

10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional	**B invents before A**	Yes No	A publicly discloses before B files prov	No Yes	N/A No	B files prov before A files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent granted to B if B can prove invention prior to A's public disclosure and A's disclosure is not 102(b) prior art	Patent granted to B under exception in 102(a)(1)(B), B's prov serves as 102(a)(1)(B) prior art to A	Patnet granted to B if B can remove A's disc and application pursuant to 102(b)(1)(A) and 102(b)(2)(A)	Neither A nor B is granted the patent as B disclosed under Art. 54(2) (bad prov)	Same	Different	Different
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional	A invents before B	Yes No	A publicly discloses before B files prov	No Yes	N/A Yes	B files prov before A files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent is granted to A unless B's prov is 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A as A can remove B's application pursuant to 102(b)(2)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional	A invents before B	Yes No	A publicly discloses before B files prov	No Yes	N/A Yes	B files prov before A files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	No	Patent is granted to A unless B's prov is 102(b) prior art	Neither A nor B is entitled to the patent as A's public disc and B's prov are 102(a)(1)(B) prior art	Patent granted to A as A can remove B's disclosure pursuant to 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional	A invents before B	Yes No	A publicly discloses before B files prov	No Yes	N/A Yes	B files prov before A files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent is granted to A unless B's prov is 102(b) prior art	Patent is granted to A under 102(B)(2)(B)	Patent granted toA pursuant to 102(b)(2)(B) and 102(b)(2)(A)	Neither A nor B is entitled to the patent due to A's own public disclosure under Art. 54(2) prior to B's prov	Same	Different	Different
10*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a provisional application after A publically discloses which is subsequently converted to a non-provisional	A invents before B	Yes No	A publicly discloses before B files prov	No Yes	N/A Yes	B files prov before A files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files prov**	Yes - A derived from B	Patent is granted to A unless B's prov is 102(b) prior art	Patent granted to A under exception in 102(a)(1)(B)	Patent granted to A pursuant to 102(b)(1)(B) and 102(b)(1)(A)	Neither A nor B is entitled to the patent due to A's own public disclosure under Art. 54(2) prior to B's prov	Same	Different	Different
11*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application before A publically discloses	**B invents before A**	Yes No	A publicly discloses after B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	No	Patent granted to B as B's util is 102(e) prior art to A	Patent granted to B as B's util is 102(a)(1)(2) prior art to A	Patent granted to B pursuant to 102(a)(2)	Patent granted to B as B filed prior to A's public disclosure under Art. 54(2)	Same	Same	Same
11*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application before A publically discloses	**B invents before A**	Yes No	A publicly discloses after B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	Yes - A derived from B	Patent granted to B as B's util is 102(e) prior art to A	**Irrelevant** - Patent granted to B as B's util is 102(a)(2) prior art to A regardless of derivation	Patent granted to B pursuant to 102(a)(2) regardless of whether A derived from B	Patent granted to B as B filed prior to A's public disclosure under Art. 54(2)	Same	Same	Same
11*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application before A publically discloses	A invents before B	Yes No	A publicly discloses after B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	No	Patent granted to A if A can prove invention prior to B's util	Patent granted to B as B's util is 102(a)(1)(2) prior art to A	Patent granted to B pursuant to 102(a)(2)	Patent granted to B as B filed prior to A's public disclosure under Art. 54(2)	Different	Same	Different
11*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application before A publically discloses	A invents before B	Yes No	A publicly discloses after B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	No Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	Yes - B derived from A	Patent granted to A if A can prove invention prior to B's util	Patent granted to A if A can prove B derived under 102(b)(2)(A)	Patent granted to A pursuant to 102(b)(2)(A) if A can show B derived	Neither A nor B is entitled to the patent as A cannot use Art. 55 as having publicly disclosed udner Art. 54(2)	Maybe different	Different	Different
12*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application after A publically discloses	**B invents before A**	Yes No	A publicly discloses before B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	No	Patent granted to B if B can prove invention before A's public disclosure and A's disclosure is not 102(b) prior art	Patent granted to neither A nor B as A's public disclosure and B's util are 102(a)(1)(B)/(a)(2) prior art	Patent granted to A under 102(a)(1) pursuant to 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Different	Same	Different
12*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application B: (1) files a non-provisional application after A publically discloses	**B invents before A**	Yes No	A publicly discloses before B files non-prov	No No	N/A N/A	Neither A nor B files a provisional	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files non-prov**	Yes - A derived from B	Patent granted to B if B can prove invention before A's public disclosure and A's disclosure is not 102(b) prior art	Patent granted to B if B can prove exception under 102(a)(1)(B)	Patent granted to B if B can show A derived pursuant to 102(b)(1)(A)	Patent granted to B if B can prove Art. 55 disclosure by A within 6 month window	Same	Same	Same

12*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses before B files non-prov	No	N/A	Neither A nor B files a provisional	Yes	Yes	Yes	??	**A files util before B files non-prov**	No	Patent granted to A unless B's util or A's disclsure is 102(b) prior art	Patent granted to A under the exception in 102(b)(2)(B)	Patent granted to A under 102(a)(1) pursuant to 102(b)(1)(B)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Different	Different
	B: (1) files a non-provisional application after A publically discloses		No		No	N/A		Yes	Yes	Yes	??									
12*	A: (1) publicly discloses X, subsequently (2) files a non-provisional application	A invents before B	Yes	A publicly discloses before B files non-prov	No	N/A	Neither A nor B files a provisional	No	Yes	Yes	??	**A files util before B files non-prov**	Yes - B derived from A	Patent granted to A unless B's util or A's disclsure is 102(b) prior art	Patent granted to A under the exception in 102(b)(2)(B) or if A can prove derivation under 102(b)(2)(A)	Patent granted to A under 102(a)(1) pursuant to 102(b)(1)(B) and 102(b)(1)(A)	Neither A nor B is entitled to the patent due to A's public disclosure under Art. 54(2)	Same	Different	Different
	B: (1) files a non-provisional application after A publically discloses		No		No	N/A		Yes	Yes	Yes	??									

Scenario Number	Scenario	Order of Invention	Public disclosure		Provisional Application			Non-Proviational Application					Derivation Claim	Current Law (First to Invent)	New Law (First Inventor to File)	New Law 2 (First to File with Grace)	European Law (First to File)	FTI v. FITF	FTF v. FITF	FTI v. FTF
			Publicly disclosed	Timing	Filed	Meets §112	Timing	Meets §112	Claimed	Published	Issued	Timing								
11A	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	B invents before A	No Yes	B public discloses before A prov	Yes N/A	Yes N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent likely not granted to A as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	Patent not granted to A as B disc is prior art under *102(a)(1)(B) and A cannot exempt B publication*	A is not entitled to the patent due to B's public disclosure under 102(a)(1)	A is not entitled to the patent due to B's public disclosure under Art. 54(2)	Maybe Different	Same	Different
11B	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	B invents before A	No Yes	B public discloses before A prov	Yes N/A	No N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent likely not granted to A as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	A is not entitled to the patent regardless of whether 112 requirement is met	A is not entitled to the patent regardless of whether 112 requirement is met	A is not entitled to the patent due to B's public disclosure under Art. 54(2)	Same (Irrelevant)	Different	Different
11C	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	A invents before B	No Yes	B public discloses before A prov	Yes N/A	Yes N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent not granted to A as B disc is prior art under *102(a)(1)(B) and A cannot exempt B publication*	A is not entitled to the patent due to B's public disclosure under 102(a)(1)	A is not entitled to the patent due to B's public disclosure under Art. 54(2)	Different	Same	Different
11D	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	A invents before B	No Yes	B public discloses before A prov	Yes N/A	No N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent not granted to A as B disc is prior art under *102(a)(1)(B) and A cannot exempt B publication*	A is not entitled to the patent regardless of whether 112 requirement is met	A is not entitled to the patent due to B's public disclosure under Art. 54(2)	Different	Same	Different
11E	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	A invents before B	No Yes	B public discloses before A prov	Yes N/A	Yes N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A only if A proves under *102(b)(2)(B)* that B disc was obtained directly or indirectly from A	Patent granted to A only if A proves under 102(b)(1)(A) that B disc was obtained directly or indirectly from A	Patent granted to A if A can prove Art. 55 disclosure by B	Maybe Different	Same	Same
11F	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X (less than 1 year before A prov and before A discl)	A invents before B	No Yes	B public discloses before A prov	Yes N/A	No N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A only if A proves under *102(b)(2)(B)* that B disc was obtained directly or indirectly from A	Patent granted to A only if A proves under 102(b)(1)(A) that B disc was obtained directly or indirectly from A	A is not entitled to the patent due to B's public disclosure under Art. 54(2) and A's inability to claim priority (bad prov)	Maybe Different	Different	Different
12*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	B invents before A	No Yes	B public discloses after A prov	Yes N/A	Yes N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent likely not granted to A as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Same	Same	Same
12*	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	B invents before A	No Yes	B public discloses after A prov	Yes N/A	No N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent likely not granted to A as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	A is not entitled to patent because A cannot claim priority	A may be entitled to the patent under the exception 102(1)(A)(B)	A is not entitled to the patent due to B's disclosure under Art. 54(2) and A's inabiltiy to claim priority (bad prov)	Same (Irrelevant)	Different	Different
12A	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	B invents before A	No Yes	B public discloses after A prov	Yes N/A	Yes N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	Yes - A derived from B	Patent likely granted to A but may be invalid as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	A is not entitled to the patent if B can show A's prov violates Art. 55	Maybe Different	Different	Different
12B	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	B invents before A	No Yes	B public discloses after A prov	Yes N/A	No N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	Yes - A derived from B	Patent likely not granted to A as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	A is not entitled to patent regardless of whether 112 requirement met	A may be entitled to the patent under the exception 102(1)(A)(B)	A is not entitled to the patent if B can show A's prov violates Art. 55	Irrelevant	Same	Different
12C	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	A invents before B	No Yes	B public discloses after A prov	Yes N/A	Yes N/A	A files prov after B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util after B publicly discloses	No	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Same	Same	Same

12D	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B publicly discloses**	No	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	A may be entitled to the patent under the exception 102(b)(1)(B)	A is not entitled to patent due to B's public disclosure and A's inabiltiy to claim priority under Art. 54(2)	Same	Different	Different
12E	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	Yes N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B publicly discloses**	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Same	Same	Same
12F	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A files provisional application, but before conversion to non-provisional	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	A files prov before B publicly discloses	Yes N/A	Yes N/A	Yes N/A	?? N/A	**A files util after B publicly discloses**	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	A is granted the patent under the exception in 102(b)(1)(A)	A is not entitled to patent due to B's public disclosure and A's inabiltiy to claim priority under Art. 54(2)	Same	Different	Different
13B	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**B invents before A**	No Yes	**B public discloses after A prov**	Yes N/A	Yes N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	No	Patent likely granted to A but B discl may be prior art under 102(f) prior invention by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Maybe Different	Different	Different
13A	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**B invents before A**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	No	Patent likely granted to A but may be invalid as B discl is prior art under 102(a) prior public use by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(A)	A is not entitled to the patent due to B's public disclosure and A's inabiltiy to claim priority	Maybe Different	Different	Different
13*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**B invents before A**	No Yes	**B public discloses after A prov**	Yes N/A	Yes N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	Yes - A derived from B	Patent likely granted to A but B discl may be prior art under 102(f) prior invention by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	A is not entitled to the patent if B can show A's prov violates Art. 55	Maybe Different	Different	Different
13*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**B invents before A**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	Yes - A derived from B	Patent likely granted to A but B discl may be prior art under 102(f) prior invention by another (if prior invention by B is known to PTO)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(A)	A is not entitled to the patent if B can show A's prov violates Art. 55	Maybe Different	Different	Different
13C	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	Yes N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	No	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A as B disc is exception under *102(b)(1)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Same	Same	Same
13D	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	No	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(A)	A is not entitled to the patent due to B's public disclosure and A's inabiltiy to claim priority	Same	Different	Different
13E	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	Yes N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from util)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(B)	Patent granted to A as A filed prior to B's disclosure under Art. 54(2)	Same	Same	Same
13F	A files a provisional for Invention X that is converted to a utility application that is published B: (1) publicly discloses Invention X after A converts provisional to a non-provisional application	**A invents before B**	No Yes	**B public discloses after A prov**	Yes N/A	No N/A	**A files prov before B publicly discloses**	Yes N/A	Yes N/A	Yes N/A	?? N/A	A files util before B publicly discloses	Yes - B derived from A	Patent granted to A as B discl is not prior art under 102(b) (measured from prov)	Patent granted to A as B disc is not prior art under *102(a)(1)(B)* *(from prov date)*	Patent granted to A as after the effective filing date defined in 101(i)(1)(A)	Patent granted to A if A can prove Art. 55 disclosure by B	Same	Same	Same

The Matrix for Changing First-To-Invent
A Files Only, B Files Only

Scenario Number	Scenario	Order of Invention	Public disclosure		Provisional Application			Non-Proviational Application					Derivation Claim	Current Law (First to Invent)	New Law (First Inventor to File)	New Law 2 (First to File with Grace)	European Law (First to File)	FTI v. FITF	FTF v. FITF	FTI v. FTF
			Publicly disclosed	Timing	Filed	Meets §112	Timing	Meets §112	Claimed	Published	Issued	Timing								
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	No Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Patent granted to B as B can claim priority to its earlier filed provisional application under 102(e)	**Irrelevant** - Patent granted to B under the exception in 102(b)(4)(B) regardless of whether A can claim priority	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	Yes Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Patent granted to B as B can claim priority to its earlier filed provisional application (A's provisional is still predated by B's)	Patent granted to B under the exception in 102(b)(4)(B)	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Same	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	No No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Neither A nor B is entitled to patent as B's prov serves as 102(e) prior art to A and vice versa	Neither A nor B is entitled to patent as B's prov serves as 102(a)(1)(A)/(B) prior art to A and vice versa	Patent granted to B as B's prov is public disclosure under 102(b)(1)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to A and B's disclosures (bad prov) under Art. 54(2)	Same	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	Yes No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Neither A nor B is entitled to patent as B's prov serves as 102(e) prior art to A and vice versa	Patent granted to A under the exception in 102(b)(4)(B) provided B's prov is not 102(a)(1)(A) prior art	Patent granted to B as B's prov is public disclosure under 102(b)(2)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to B's disclosure (bad prov) under Art. 54(2)	Maybe different	Different	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	No Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	Yes - A derived from B	Patent granted to B as B can claim priority to its earlier filed provisional application under 102(a)/(e)	**Irrelevant** - Patent granted to B under the exception in 102(b)(4)(B) regardless of whether A derived	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	Yes Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	Yes - A derived from B	Patent granted to B as B can claim priority to its earlier filed provisional application (A's provisional is still predated by B's)	**Irrelevant** - Patent granted to B under the exception in 102(b)(4)(B) regardless of whether A derived	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	No No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	Yes - A derived from B	Neither A nor B is entitled to patent as B's prov serves as 102(e) prior art to A and vice versa	Patent granted to B under 102(b)(2)(A) if B can show that A's prov is derived from B	Patent granted to B as B's prov is public disclosure under 102(b)(1)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to A and B's disclosures (bad prov) under Art. 54(2)	Different	Different	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	B invents before A	No No	N/A	Yes Yes	Yes No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	Yes - A derived from B	Neither A nor B is entitled to patent as B's prov serves as 102(e) prior art to A and vice versa	Patent granted to B under 102(b)(2)(A) if B can show that A's prov is derived from B	Patent granted to B as B's prov is public disclosure under 102(b)(2)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to B's disclosure (bad prov) under Art. 54(2)	Different	Different	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	A invents before B	No No	N/A	Yes Yes	No Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to B under the exception in 102(b)(4)(B) regardless of whether A can claim priority	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Different	Same	Different
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	A invents before B	No No	N/A	Yes Yes	Yes Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to B under the exception in 102(b)(4)(B)	Patent granted to B as B's prov is prior art to A pursuant to 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Different	Same	Different
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	A invents before B	No No	N/A	Yes Yes	No No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util after B files util	No	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Neither A nor B is entitled to patent as B's prov serves as 102(a)(1)(A)/(B) prior art to A and vice versa	Patent granted to B as B's prov is public disclosure under 102(b)(1)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to A and B's disclosures (bad prov) under Art. 54(2)	Different	Same	Different

1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	**A invents before B**	No No	N/A	Yes Yes	Yes No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to A under the exception in 102(b)(4)(B) provided B's prov is not 102(a)(1)(A) prior art	Patent granted to B as B's prov is public disclosure under 102(b)(2)(B) overcoming A's prov	Neither A nor B is entitled to the patent due to B's disclosure (bad prov) under Art. 54(2)	Same	Different	Different
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	**A invents before B**	No No	N/A	Yes Yes	No Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to A under 102(b)(2)(A) if A can show that B's prov was derived from A (B's util blocked under s. 102(a)(1)(A))	Patent granted to A if A can show B's prov is derived from A pursuant to 102(b)(2)(A)	Patent granted to B under Art. 54(2) as having filed before A	Same	Different	Different
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	**A invents before B**	No No	N/A	Yes Yes	Yes Yes	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to A under 102(b)(2)(A) if A can show that B's prov was derived from A (B's util blocked under s. 102(a)(1)(A))	Patent granted to A if A can show B's prov is derived from A pursuant to 102(b)(2)(A)	Patent granted to A if A can prove B's prov violates Art. 55	Same	Same	Same
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	**A invents before B**	No No	N/A	Yes Yes	No No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to A under 102(b)(2)(A) if A can show that B's prov was derived from A (B's util blocked under s. 102(a)(1)(A))	Patent granted to A if A can show B's prov is derived from A pursuant to 102(b)(1)(A)	Neither A nor B is entitled to the patent due to A and B's disclosures (bad prov) under Art. 54(2)	Same	Different	Different
1*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a provisional application before A files prov and (2) converts prov application to non-provisional before A converts but after A files prov	**A invents before B**	No No	N/A	Yes Yes	Yes No	A files prov after B files prov	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented before B's prov unless B's prov is 102(b) art	Patent granted to A as B's prov is not prior art under 102(b)(2)(A)	Patent granted to A if A can show B's prov is derived from A pursuant to 102(b)(1)(A)	Neither A nor B is entitled to the patent due to B's disclosure (bad prov) under Art. 54(2)	Same	Different	Different
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B as B's utility is prior art under 102(e)	Patent granted to B under 102(a)(2)	Patent granted to B under 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Same	Same	Same
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**B invents before A**	No No	N/A	Yes No	No N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B as B's utility is prior art under 102(e)	**Irrelevant** - Patent granted to B under 102(a)(2) regardless of whether or not A can claim priority to prov	Patent granted to B under 102(a)(2) regardless of whether or not A can claim priority to prov	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B's utility is prior art under 102(e)	**Irrelevant** - Patent granted to B under 102(a)(2) regardless of whether or not A derived	Patent granted to B under 102(a)(2) regardless of whether or not A dreived	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**B invents before A**	No No	N/A	Yes No	No N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B's utility is prior art under 102(e)	**Irrelevant** - Patent granted to B under 102(a)(2) regardless of whether or not A derived	Patent granted to B under 102(a)(2) regardless of whether or not A dreived	Patent granted to B under Art. 54(2) as having filed before A	Same (Irrelevant)	Same	Same
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A as A invented prior to B's prov provided B's util is not 102(b) prior art	Patent granted to B under 102(a)(2)	Patent granted to B under 102(a)(2)	Patent granted to B under Art. 54(2) as having filed before A	Different	Same	Different
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**A invents before B**	No No	N/A	Yes No	No N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A as A invented prior to B's prov provided B's util is not 102(b) prior art	Patent granted to B under 102(a)(2) regardless of whether or not A can claim priority to prov	Patent granted to B under 102(a)(2) regardless of whether or not A can claim priority to prov	Patent granted to B under Art. 54(2) as having filed before A	Different	Same	Different

2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A invented prior to B's prov provided B's util is not 102(b) prior art	Patent granted to A under s. 102(b)(2)(A) if A can establish that B derived its application from A (**NOTE** - s. 102(b)(2)(B))	Patent granted to A under 102(b)(2)(A) if A can establish that B derived its application from A	Patent granted to A if A can prove B's util violates Art. 55	Same	Same	Same
2*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: files a utility application before A files provisional application	**A invents before B**	No No	N/A	Yes No	No N/A	A files prov after B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes -B derived from A	Patent granted to A as A invented prior to B's prov provided B's util is not 102(b) prior art	Patent granted to A under s. 102(b)(2)(A) if A can establish that B derived its application from A (**NOTE** - s. 102(b)(2)(B))	Patent granted to A under 102(b)(2)(A) if A can establish that B derived its application from A	Neither A nor B is entitled to the patent due to A and B's disclosure (bad prov/util) under Art. 54(2)	Same	Same	Same
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to A under 102(a)(2)	Patent granted to A under 102(a)(2)	Patent granted to A under Art 52(2) as having filed before B	Different	Same	Different
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**B invents before A**	No No	N/A	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to A as A's prov is prior art under 102(a)(1)(A)/(B) (provided A's prov does not bar A)	Patent granted to A as A's prov is prior art under 102(a)(1)	Patent granted to neither A nor B due to A's disclosure (bad prov)	Different	Different	Different
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to B under s. 102(b)(2)(A) if B can show A derived from B	Patent granted to B under s. 102(b)(2)(A) if B can show A derived from B	Patent granted to B if B can prove A's prov violates Art. 55	Same	Same	Same
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**B invents before A**	No No	N/A	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - A derived from B	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to B under s. 102(b)(2)(A) if B can show A derived from B	Patent granted to B under s. 102(b)(1)(A) if B can show A derived from B	Patent granted to B if B can prove A's prov violates Art. 55	Same	Same	Same
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A as A's prov is 102(e) prior art to B (if A effectively claims priority)	Patent granted to A under 102(a)(2)	Patent granted to A under 102(a)(2)	Patent granted to A under Art 52(2) as having filed before B	Same	Same	Same
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**A invents before B**	No No	N/A	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	No	Patent granted to A as A's prov is 102(e) prior art to B (even lacking priority)	Patent granted to A as A's prov is prior art under 102(a)(1)(A)/(B) (provided A's prov does not bar A)	Patent granted to A as A's prov is prior art under 102(a)(1)	Patent granted to neither A nor B due to A's disclsoreu (bad prov)	Same	Different	Different
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A's prov is 102(e) prior art to B (if A effectively claims priority)	**Irrelevant** - Patent granted to A under s. 102(a)(2) regardless of whether B derived from A	Patent granted to A under 102(a)(2) regardless of whether B derived from A	Patent granted to A under Art 52(2) as having filed before B	Same (Irrelevant)	Same	Same
3*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A files prov	**A invents before B**	No No	N/A	Yes No	No N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util after B files util**	Yes - B derived from A	Patent granted to A as A's prov is 102(e) prior art to B (even lacking priority)	Patent granted to A as A's prov is prior art under 102(a)(1)(A)/(B) or under 102(b)(2)(A)	Patent granted to A as A's prov is prior art under 102(a)(1)	Patent granted to neither A nor B due to A's disclsoreu (bad prov)	Same	Different	Different
4*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A converts to utility application	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files util**	No	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to A under 102(a)(1)(A)/(B) or 102(a)(2)	Patent granted to A under 102(a)(2)	Patent granted to A under Art. 54(2) as A filed before B	Different	Same	Different

4*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A converts to utility application	**B invents before A**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files util**	Yes - A derived from B	Patent granted to B as B invented before A filed prov, provided A's prov is not 102(b) prior art	Patent granted to B under 102(b)(2)(A) if B can show that A's prov and util is derived from B	Patent granted to B under 102(b)(2)(A) if B can show that A's prov and util is derived under B	Patent granted to B if B can prove A's prov violates Art. 55	Same	Same	Same
4*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A converts to utility application	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files util**	No	Patent granted to A under 102(a)/(b)/(e)	Patent granted to A under 102(a)(1)(A)/(B) or 102(a)(2)	Patent granted to A under 102(a)(2)	Patent granted to A under Art. 54(2) as A filed before B	Same	Same	Same
4*	A: (1) files a provisional application, which is later (2) converted to non-provisional application B: (1) files a utility application after A converts to utility application	**A invents before B**	No No	N/A	Yes No	Yes N/A	A files prov before B files util	Yes Yes	Yes Yes	Yes Yes	?? ??	**A files util before B files util**	Yes - B derived from A	Patent granted to A under 102(a)/(b)/(e)	**Irrelevant** - Patent granted to A under 102(a)(1)(A)/(B) or 102(a)(2) regardless of whether B derived	Patent granted to A under 102(a)(2) regardless of whether B derived from A	Patent granted to A under Art. 54(2) as A filed before B	Same (Irrelevant)	Same	Same
5*	A: (1) files utility application B: (1) files a utility application before A files utility	**B invents before A**	No No	N/A	No No	N/A N/A	N/A	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util before B files util	No	Patent granted to B under s. 102(e)	Patent granted to B under s. 102(a)(2)	Patent granted to B under 102(a)(2)	Patent granted to B art Art. 54(2) as B filed before A	Same	Same	Same
5*	A: (1) files utility application B: (1) files a utility application before A files utility	**B invents before A**	No No	N/A	No No	N/A N/A	N/A	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util before B files util	Yes - A derived from B	Patent granted to B under s. 102(e)	**Irrelevant** - B is entitled to patent under s. 102(a)(2) regardless of whether A derived from B	Patent granted to B under 102(a)(2) regardless of whether A derived from B	Patent granted to B art Art. 54(2) as B filed before A	Same (Irrelevant)	Same	Same
5*	A: (1) files utility application B: (1) files a utility application before A files utility	**A invents before B**	No No	N/A	No No	N/A N/A	N/A	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util before B files util	No	Patent granted to A unless B's util application constitutes 102(b) prior art	Patent granted to B under s. 102(a)(2)	Patent granted to B under 102(a)(2)	Patent granted to B art Art. 54(2) as B filed before A	Different	Same	Different
5*	A: (1) files utility application B: (1) files a utility application before A files utility	**A invents before B**	No No	N/A	No No	N/A N/A	N/A	Yes Yes	Yes Yes	Yes Yes	?? ??	A files util before B files util	Yes - B derived from A	Patent granted to A unless B's util application constitutes 102(b) prior art	Patent granted to A under s. 102(b)(2)(A) if A can establish that B derived its application from A	Patent granted to A under s. 102(b)(2)(A) if A can establish that B derived its application from A	Patent granted to A if A can prove B's util violates Art. 55	Same	Same	Same