



Preliminary Analysis on Practice of “Exclusion Rule” for Prior Art in CN, US and EP

Featured Article

Abstract

This article proposes the concept of “exclusion rule” for prior art, which is intended to refer to the situation where at least part of a prior art document is excluded from the effect of prior art due to erroneous content therein. This article provides, from the perspective of an agent who has a certain extent of practical experience in China (“CN”), the United States (“US”) and Europe (“EP”), a preliminary introduction and comparative analysis on the practice of exclusion rule in these countries based on relevant regulations and cases.

Keywords

Prior Art, Exclusion Rule, CN, US, EP

Introduction

In February 2022, the Intellectual Property Court (“IPC”) of the Supreme People's Court (“SPC”) issued the Summary of Key Points of Judgments (2021), in which the item 4, titled “determination of disclosure when there are contradictory records in a single prior art document”, is derived from the Administrative Judgment No. 83 (2021), IPC, SPC and reproduced as follows.

“If there is a contradiction between a specific technical solution and other related contents recorded in a single prior art document, and neither a reasonable explanation nor a decision on whether it is correct can be made by those skilled in the art after reading the document completely with reference to common knowledge, it can be determined that the above-mentioned specific technical solution is not disclosed by the prior art document.”

In essence, the above-reproduced key point indicates a judgement rule for the following situation. That is, when there is an error in a prior art document, the erroneous disclosure may not be used to evaluate novelty or inventiveness due to the error (i.e., its effectiveness of prior art is excluded), even though the erroneous disclosure meets other conditions for constituting a prior art. For the sake of discussion, the “exclusion rule” of prior art is used throughout this article for referring to the above situation.

In practice, it is found that the application of the exclusion rule also exists in the patent examination practice of other countries. The following is an introduction and comparative analysis on the application of the exclusion rule in CN, US and EP at the regulatory and case levels.

I. CN Practice

1.1 Relevant regulations

Article 22(5) of the Chinese Patent Law (“Patent Law”) provides a definition of prior art. Section 2.1, Chapter 3, Part II of the Patent Examination Guidelines (“Examination Guidelines”) issued by the China National Intellectual Property Administration (“CNIPA”) further provides rules and examples for determining prior art.

Although the exclusion rule of prior art is not stated in the Patent Law or the Examination Guidelines, it is known that the exclusion rule is provided in an internal examination regulation of the CNIPA. This provision is given in such a manner that, for any content disclosed in a prior art document in a contradictory manner, if it can be determined as an obvious typo or interpreted with an only reasonable explanation by those skilled in the art, this content no longer has the effect of prior art, but the new content derived based on the final correction or reasonable explanation can be used as prior art instead of the original content.

1.2 Related case

The application of exclusion rule for prior art is clearly indicated in the Administrative Judgment No. 83 (2021), IPC, SPC as mention above, which is to be summarized below^[1].

The decision of rejection made to the application No. 201510452769.1 was upheld by the CNIPA in its re-examination decision No. 183507 on the grounds that the application is not novel over the reference document D1 (EP1518906A1).

The applicant appealed to the Beijing Intellectual Property Court against the re-examination decision. After hearing the case, the Court issued Administrative Judgment No. 14577 (2019), upholding the re-examination decision No. 183507. The applicant then appealed to the SPC against the first instance judgment.

One of key arguments in the case lies in whether the contradictory content in the prior art can be used to evaluate the novelty of the application. Specifically, the subject matter of an independent claim in the application involves the use of water-insoluble bismuth nitrate in coating. D1 generally

relates to the use of water-soluble metal nitrates in coating, but discloses, in listing examples of water-soluble metal nitrates, a compound which is well known to be water-insoluble bismuth nitrate. It is to be determined by the SPC in this case that whether the erroneous example disclosed in D1, which contradicts the overall technical solution, can be used as prior art.

The CNIPA argued that, even if the bismuth nitrate is an improper example in the context, D1 still discloses the use of a water-insoluble bismuth nitrate in coating.

In the judgment of the second instance, the SPC disagrees with the CNIPA and holds, after hearing, that “the content of prior art disclosed in a printed publication is subject to the recordation of the publication. However, if any content in the publication is obviously inconsistent with other related content therein, and a reasonable explanation cannot be given by those skilled in the art based on the other content recorded in the publication and the common knowledge in the art, such content cannot be considered as disclosed by the publication, i.e., it cannot constitute prior art in the sense of the Patent Law.”

II. US Practice

2.1 Relevant regulations

35 U.S.C. 102 establishes the novelty requirement for a patent and defines the scope of prior art. Further, the Manual of Patent Examining Procedure (“MPEP”) gives detailed rules for determining prior art in section 2121.

“2121 Prior Art...

I. PRIOR ART IS PRESUMED TO BE OPERABLE/ENABLING

When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to rebut the presumption of operability...

Where a reference appears to not be enabling on its face, however, an applicant may successfully challenge the cited prior art for lack of enablement by argument without supporting evidence...

See also MPEP § 716.07.”

As seen from section 2121 of the MPEP as partially reproduced above, although the applicant bears the burden of proof against the operability of the prior art, the applicant may still successfully challenge the operability of the prior art even without providing evidence when the prior art is clearly non-enabling.

With respect to the contention that the prior art is not operable, MPEP § 716.07 further gives a following example.

“716.07 Inoperability of References...

... In re Yale, 434 F.2d 66, 168 USPQ 46 (CCPA 1970) (Correspondence from a co-author of a literature article confirming that the article misidentified a compound through a typographical error that would have been obvious to one of ordinary skill in the art was persuasive evidence that the erroneously typed (The compound was not put in the possession of the public).”

As seen from above, the MPEP gives an example for applying the exclusion rule of prior art by citing the *In re Yale* case, i.e., if there is an error in the prior art document that would have been obvious to those skilled in the art, it is arguable that the erroneous disclosure does not have the effectiveness of prior art.

2.2 Related case

The *In re Yale* case has established the following standard (“Yale standard”) for the application of exclusion rule.

“where a prior art reference includes an obvious error of a typographical or similar nature that would be apparent to one of ordinary skill in the art who would mentally disregard the errant information as a misprint or mentally substitute it for the correct information, the errant information cannot be said to disclose subject matter... . The remainder of the reference would remain pertinent prior art disclosure.”

Recently, the U.S. Court of Appeals for the Federal Circuit (CAFC) applied the Yale standard again in two related cases (*LG Electronics Inc. v. ImmerVision, Inc.*, Case Nos. 21-2037; -2038, Fed. Cir. Jul. 11, 2022), which are summarized below^{[2][3][4]}.

The plaintiff, LG Electronics Inc. (“LG”), filed two requests for inter partes review (IPR) against two claims of the patent US 684,990 held by the defendant, ImmerVision Inc. (“ImmerVision”), on the ground that relevant technical features of those claims are disclosed in a prior art patent US 5861999 to Tada.

ImmerVision’s expert witness experimentally found that the disclosure of Tada cited by LG as prior art included incorrect data, and that the incorrect data was derived from a copy-and-paste of another incompatible embodiment in Tada. In addition, when the correct data recorded in the Japanese priority application of Tada was used, the relevant technical features of the patent cannot be disclosed.

The U.S. Patent Trial and Appeal Board (PTAB) accepted the above IPR requests and found in its decisions IPR 2020-00179 and IPR 2020-00195 that the above-mentioned incorrect data was apparently erroneous and would have been mentally disregarded by those skilled in the art, thereby holding that the relevant technical features of the patent were not disclosed by Tada based on the Yale standard.

LG appealed the decision to the CAFC, arguing that the incorrect data in Tada was not apparently erroneous. LG’s arguments included: 1) the Yale standard requires that the error should be “immediately” recognized by those skilled in the art, while ImmerVision’s expert witness took 10 to 12 hours of experimentation and calculation to identify the incorrect data in Tada, and the incorrect data had not been recognized for the past twenty years; 2) the incorrect data in Tada goes beyond a typographical error and the Yale standard should be limited to mere spelling errors.

The CAFC ultimately upheld the PTAB and rejected LG’s arguments, holding that the Yale standard does not apply a time requirement for recognizing the error and that “[t]he distinction between the typographical error in Yale and the copy-and-paste error here is a distinction without a difference.”

III. EP Practice

3.1 Relevant regulations

The definition of prior art is given in Article 54(2) of the European Patent Convention (“EPC”). The Guidelines for Examination (“EPO Guidelines”) issued by the European Patent Office (“EPO”) further provide rules and examples of prior art determination in Chapter IV, Part G, and specify in section 9 thereof the examination guidelines when errors occur in prior-art documents.

“9. Errors in prior-art documents

Errors may exist in prior-art documents.

When a potential error is detected, three situations may arise depending on whether the skilled person, using general knowledge,

- (i) can directly and unambiguously derive from the prior art document that it contains an error and what the only possible correction should be;
- (ii) can directly and unambiguously derive from the prior art document that it contains an error, but is able to identify more than one possible correction; or
- (iii) cannot directly and unambiguously derive from the prior art document that an error has occurred.

When assessing the relevance of a document to patentability,

In case (i), the disclosure is considered to contain the correction;

In case (ii), the disclosure of the passage containing the error is not taken into account;

in case (iii), the literal disclosure is taken into account as is.”

3.2 Related cases

In the book “Case Law of the Boards of Appeal” published by the EPO, subsection 4.9 in the chapter of novelty summarizes several decisions related to errors in prior art document, some of which are reproduced partially as follows^[5].

In T 412/91 the board took the view that the incorrect teaching of a document was not comprised in the state of the art. It stated that, in principle, what constituted the disclosure of a prior art document was governed not merely by the words actually used in its disclosure, but also by what the publication revealed to the skilled person as a matter of technical reality. If a statement was plainly wrong, whether because of

its inherent improbability or because other material showed that it was wrong, then – although published – it did not form part of the state of the art. Conversely, if the skilled person could not see the statement was wrong, then it did form part of the prior art.

In T 230/01 the board noted that a document normally forms part of the state of the art, even if its disclosure is deficient, unless it can unequivocally be proven that the disclosure of the document is not enabling, or that the literal disclosure of the document is manifestly erroneous and does not represent the intended technical reality. Such a non-enabling or erroneous disclosure should then not be considered part of the state of the art.

IV. Comparative Analysis

In view of above, from the perspective of statutory provisions and judgement, the exclusion rule of prior art has been applied in patent practice in CN, US and EP. The following attempts to proceed with the comparative analysis therebetween in five aspects.

4.1 Jurisprudential basis

If the substantive examination is to be considered as a balance between patent rights and the public interest, the prior art, which is indispensable for evaluating patentability in the substantive examination, is undoubtedly an important weight on the balance. When a standard for defining the prior art is lenient, the balance tends to favor the public interest; conversely, it favors the patentee.

As more and more countries/regions choose the “absolute novelty” standard, the exclusion rule of prior art is to assume an important role in adjusting the standard for defining the prior art. While the absolute novelty standard significantly lowers standard for defining the prior art, the application of the exclusion rule can tip the balance in favor of the patentee.

In China, the absolute novelty standard was established after the third amendment to the Patent Law, which was implemented in 2009. Prior to the SPC case described above, the same view as that of the CNIPA in that case was more prevalent in examination practice.

The EPC has embodied the absolute novelty standard in Article 54 since its entry into force in 1979. The first available appeal board decision (T 89/87) involving the exclusion rule was made in 1989^[5], while section 9, Chapter IV, Part G of the EPO Guidelines cited above was only documented in the 2012 edition thereof.

The U.S. patent law was amended to reflect the absolute novelty standard with a condition (one-year grace period) only after the enactment of the America Invents Act (AIA) in 2011. However, the *In re Yale* case mentioned above was decided in 1970.

Among the three countries, the United States is still the most patentee-friendly country in terms of the standard for defining prior art; Europe, while establishing the absolute novelty standard at the earliest, provides the most specific and feasible exclusion rule of prior art; China, with the reform of the patent system being active, is relatively conservative in the application of the exclusion rule.

4.2 Legal Background

The application of the exclusion rule is tightly linked to the definition of prior art.

According to Article 22(5) of the Patent Law, “prior art refers to **technology** that was known to the public at home and abroad before the filing date”, in which the headword is technology. According to this definition, room has been already left for interpreting whether errors in prior art document can constitute “technology”. For example, the erroneous information in a disclosure may not meet the meaning of “technology” due to its inoperability and, accordingly, cannot constitute prior art in the sense of the Patent Law. In the context of this legal provision, it seems that the exclusion rule is not necessary to be provided separately, but can be reflected by the literal interpretation of the law.

According to Article 54(2) of the EPC, “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.” This definition clearly cannot be

interpreted literally to exclude incorrect content in the prior art. Therefore, the exclusion rule is necessary to be provided separately. In other words, the law needs to be interpreted restrictively in order to exclude the effectiveness of prior art for errors that meet the legal definition of “prior art”.

Under 35 U.S.C. 102(a)(1), “[a] person shall be entitled to a patent unless...the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.” Similarly to the provisions of Article 54(2) of the EPC, the prior art, understood according to the literal meaning of 35 U.S.C. 102(a)(1), should also cover the errors disclosed therein.

From the perspective of legal provisions, a relatively broad scope of prior art is defined in US and EP patent law, so it is necessary to make restrictive interpretation of law to apply the exclusion rule. In contrast, the definition of prior art given in the Chinese Patent Law appears to be more reasonable, so that the exclusion rule can be applied through the literal interpretation of law.

4.3 Overlapping with the element of “operability”

It is a generally accepted view in US and EP patent practice that an inoperable (or non-reproducible or non-enabling) disclosure does not constitute valid prior art. Since erroneous disclosures are usually not operable, the necessity for a separate exclusion rule again becomes an issue worth discussing.

The EPO Guidelines provide a clear guidance in Chapter IV, Part G. Specifically, section 2 of Chapter IV explains in detail the element of operability for prior art, which can be summarized as “[w]here a prior-art document discloses subject-matter which is relevant to the novelty and/or inventive step of the claimed invention, the disclosure of that document must be such that the skilled person can **reproduce** that subject-matter using common general knowledge.” On the other hand, the principles of dealing with error in prior art documents are provided in detail in section 9 of Chapter IV as

cited above, which will not be repeated here.

As can be seen from section 2121 of MPEP, although “[w]hen the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is **presumed to be operable**,” it is explicitly required in the same section to consider the operability of prior art. At the same time, the erroneous disclosure is seemingly considered as one of the grounds for arguing that the prior art is inoperable.

Unlike EP or US, in patent examination practice of CN, it appears that the requirement of operability can only be understood from the definition of prior art under the Patent Law, while the Examination Guidelines do not mention whether the operability or reproducibility should be considered in determining the prior art.

While some errors may simultaneously render the prior art inoperable, other errors may not destroy the operability of the prior art. For example, incorrect experimental data may simultaneously render relevant disclosure inoperable; but regarding the reference document D1 mentioned in the SPC case above, a compound belonging to the water-insoluble bismuth nitrate, which is erroneously exemplified as a water-soluble metal nitrate, is still operable to be applied in a coating.

Accordingly, from the perspective of overlapping between the exclusion rule and the operability of prior art, the provisions in the EPO Guidelines are more reasonable and worthy of reference.

4.4 Scope of rule application

The type and degree of error that triggers the exclusion rule determines the scope of rule application and, thus, can affect the determination standard of prior art.

The application scope of the exclusion rule is clearly defined in the EPO Guidelines. According to section 9 of Chapter IV, Part G of the EPO Guidelines quoted above, errors that can be directly and unambiguously identified by those skilled in the art cannot be considered as prior art. Furthermore, if there is an only possible

correction that can be directly and unambiguously derived by those skilled in the art, the correction will be considered as prior art.

From the provisions of the above-mentioned internal examination regulation of the CNIPA, it appears that the presence of contradiction is necessary for triggering the exclusion rule. The Administrative Judgment No. 83 (2021), IPC, SPC seems to combine the views of the internal examination regulation and the EPO Guidelines. Specifically, in terms of the type of error, this Judgment found that the factual basis for triggering the exclusion rule was the presence of contradictory content. In terms of the degree of error, the Judgment adopted a view similar to that of the EPO Guidelines, i.e., it found that what could not be reasonably explained by those skilled in the art cannot constitute prior art in the sense of Patent Law. At the same time, the Judgment also pointed out in its concluded summary that the contradictory record that “cannot be determined to be correct or incorrect” by those skilled in the art still is not considered as prior art, thereby obviously expanding the application scope of the exclusion rule.

The Yale standard mentioned above appears to set the most stringent standard for the application of the exclusion rule, i.e., only “where a prior art includes an obvious error of a typographical or similar nature that would be apparent to one of ordinary skill in the art who would mentally disregard the errant information as a misprint or mentally substitute it for the correct information,” the errant disclosure does not constitute prior art. Nonetheless, the error of a “similar nature” leaves considerable room for interpretation of the Yale standard. For example, as Judge Newman dissented in the two related decisions mentioned above ^{[2][3]}, an error meeting the Yale standard should be “apparent to the reader and may conveniently be ignored without impeaching the content of the information,” and the incorrect data in Tada was not “typographical or similar in nature, for its existence was not discovered until an expert witness conducted a dozen hours of experimentation and calculation.”

In summary, the application scope of the

exclusion rule is clearly defined in the EPO guidelines, but the scope of errors triggering the exclusion rule in CN and US patent practice is still relatively vague and open to question. On the other hand, it can also be noted that, in the patent examination practice of the three countries, the perspective of those skilled in the art is introduced for determining the error in prior art, thereby leaving further room for interpretation and argument on the application of the exclusion rule.

4.5 Results of application

From sections I-III above, it can be seen that the application results of the exclusion rule can be summarized as two levels. The first level is to exclude the effectiveness of prior art for the erroneous content, which is a direct and spontaneous meaning of the exclusion rule. The second level is to, based on the first level, further determine that the only possible correction of the erroneous content effects as prior art.

The internal examination regulation of the CNIPA seemingly provides the second level of result for contradictory content which is an obvious typo or for which an only reasonable correction exists. However, it is not clear whether the contradictory content has the effect of prior art when the it neither is an obvious typo nor has an only reasonable correction. The Administrative Judgment No. 83 (2021), IPC, SPC has solved such question to a certain extent, that is, the contradictory content that cannot be given a reasonable correction according to common knowledge is definitely excluded from the prior art.

The Yale standard mentioned above appears to mention only the first level of result, that is, an obvious typographical error or an error of a similar nature is not considered as prior art. However, the standard also mentions that one of the conditions for meeting the above error is that those skilled in the art would mentally substitute it for the correct information. Therefore, the second level of result is also implicit in the standard, that is, the correct information may replace the incorrect information as prior art if those skilled in the art would mentally substitute

the incorrect information for the correct information.

As discussed in section III above, different levels of application results are provided for different error cases in the EPO Guidelines. Specifically, the second level of result is applied for errors that can be directly and unambiguously determined and for which there is an only possible correction, and the first level of result is applied for errors that can be directly and unambiguously determined but for which there is more than one possible correction. In addition, the EPO Guidelines further provide that, for a potential error that cannot be directly and unambiguously determined as an error, the literal disclosure is considered as prior art.

In view of above, the two levels of application results of the exclusion rule are reflected in the patent practice in China, the United States and Europe. In comparison, the provisions of the EPO Guidelines are the most clear and complete, with relatively feasible guidance on applying the exclusion rule of prior art.

Conclusion

Prior art is the cornerstone for evaluating patentability, and the exclusion rule plays an important role in regulating the standard for determining prior art. The reasonableness of applying the exclusion rule for prior art is obvious, for example, when the key word “technology” is present in the definition of prior art in Chinese Patent Law, or when the “operability” of prior art is taken into account in the EP and US patent examination practice. Furthermore, with respect to the application of the exclusion rule, the practice in China, the United States and Europe coincidentally introduces the perspective of those skilled in the art, but present different application scopes and results in the form of written regulations or jurisprudence, thereby leaving room for interpretation and argument on the application of the exclusion rule. Through this article, it is hoped that the exclusion rule of prior art would be paid more attention to in practice.

References

[1] “Consideration on Erroneous Content of Prior Art Document in Evaluating Novelty of Invention and Evaluation Criteria for Novelty of Usage Invention”;

<https://www.zhongzi.com.cn/CN/10441-11342.aspx>

[2] *LG Electronics Inc. v. ImmerVision, Inc.*, Case Nos. 21-2037; -2038, Fed. Cir. Jul. 11, 2022;

https://cafc.uscourts.gov/opinions-orders/21-2037.OPINION.7-11-2022_1975922.pdf

[3] “Clearly, the Disclosure Was an Error”; <https://www.ipupdate.com/2022/07/clearly-the-disclosure-was-an-error/>

[4] “CAFC Finds that Misrepresentation of Prior Art Document Does Not Constitute Disclosure”; <https://mp.weixin.qq.com/s/bhD2QScNjIQwYJez99Y9gQ>

[5] “Case Law of the Boards of Appeal”; https://www.epo.org/law-practice/legal-texts/html/caselaw/2019/e/clr_i_c_4_9.htm

The “Featured article” is not equal to legal opinions. If you need special legal opinions, please consult our professional consultants and lawyers. The email address of our company is: lbtj@lungtin.com which can also be found on our website www.lungtin.com

For more information, please contact the author of this article:

ZHANG, Kanyi (Jack): Partner, Deputy Manager, Senior Patent Attorney, Attorney at Law



ZHANG, Kanyi (Jack)
Partner, Deputy Manager,
Senior Patent Attorney ,
Attorney at Law

Mr. Jack Zhang has expertise in patent prosecution and litigation in China, as well as cooperating with local lawyers to handle patent prosecution in major countries and regions such as United States, Europe, Australia, Canada, India, Brazil, etc. Mr. Zhang has rich experience in patent agency services, including, for example, drafting of application document, Chinese-English translation and reviewing, response to Office Actions, and patent re-examination, invalidation and administrative litigation procedures, and is particularly good at handling patent applications and providing invalidation and litigation services for domestic and foreign clients. He focuses on the technical fields of computer software and hardware, Internet, e-commerce, electronic circuits, communications, semiconductors, image processing, display and lighting, machinery, automation, and so on. Mr. Zhang has handled more than 1,000 patent applications and more than 1,500 Office Actions in China, United States, Europe, India and other countries and regions. In 2018, Mr. Zhang have won two patent invalidity cases in “Internet Patent Dispute Cases Ranked No. 1” (selected by people.cn as one of the Top 10 typical patent cases in 2018), and helped a leading semiconductor company to achieve favorable results in patent civil litigation cases and the related patent invalidity case.



18th Floor, Tower B, Grand Place, No 5, Huizhong Road,
Chaoyang District, Beijing 100101, P. R. China

Tel: 0086-10-84891188 Fax: 0086-10-84891189

Email: LBTJ@lungtin.com Web: www.lungtin.com