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This contribution, the first of a series of articles on AI solutions, is an introduction to how the EPO treats software inventions, or computer-implemented inventions (CII) in the office terminology, as well as how artificial intelligence and machine learning are generally framed in the CII case law. The coming articles will focus on more specific aspects of AI/ML inventions, like sufficiency of disclosure and inventive step, as well as on whether and how case law on computer simulations may affect AI/ML inventions. In our discussions, we will review some decisions of the Boards of Appeal and explore whether any tools are available to defend patentability of inventions applying data to an AI-black-box.

1. Introduction

Recent years have seen an increased availability of big data as a source of new useful applications, and of cloud computing resources, which favored the deployment of artificial intelligence (AI) and machine learning (ML) techniques for exploiting the advantages of data. As a result, an increase in the number of inventions focusing on AI and ML has been seen in recent years.

These inventions are largely seen as a sub-category of software inventions, for which a large and well-established case law is available. At the same time, there are open issues and questions to face in daily practice.

2. Examination of CIIs at the EPO: The two-hurdle approach

The EPO considers AI and ML as a sub-category of mathematical methods on the grounds that they are based on computational models and algorithms. Mathematical methods implemented on computers, and hence also AI/ML, are then treated as a sub-class of CIIs.\(^1\)

It is thus important to first understand how the EPO generally examines CIIs and then how this practice applies to AI/ML.

The EPC contains provisions intended to allow grant of patents only for those software inventions that bring an improvement to technology.\(^2\) Owing to these, and as a result of well-established case law, the EPO examination practice is based on a two-hurdle approach.

2.1 The first hurdle: Any technical means makes the claim eligible for patent protection

In the first hurdle, claims are barred from patentability when they are evidently unrelated to technology, like for example in the case of aesthetic creations, mathematical methods, scientific theories, business models, abstract ideas or computer programs\(^3\) insofar as they do nothing more than merely translating a non-technological idea into a computer language.\(^4\) It is relatively easy to overcome the first hurdle, as it is sufficient for the claim to recite at least one technical means, no matter how trivial: an ordinary computer or even pen and paper\(^5\) can do the job.

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\(^1\) See the Guidelines for Examination in the European Patent Office (Guidelines), 2022, Part G-II, 3.3 and 3.3.1.

\(^2\) Article 52(1) EPC states that “European patents shall be granted for any inventions, in all fields of technology […]”, wherein the reference to technology was introduced with the EPC revision (known as EPC 2000) to highlight its relevance. See also e.g. Rules 42(1)(a) and 43(1) EPC referring to the technical field addressed by the description and the technical features recited by the claims, respectively, as relied upon by case law also before the EPC 2000, see e.g. T641/00 (COMVIK).

\(^3\) Article 52(1) EPC states that “European patents shall be granted for any inventions, in all fields of technology […]”, wherein the reference to technology was introduced with the EPC revision (known as EPC 2000) to highlight its relevance. See also e.g. Rules 42(1)(a) and 43(1) EPC referring to the technical field addressed by the description and the technical features recited by the claims, respectively, as relied upon by case law also before the EPC 2000, see e.g. T641/00 (COMVIK).

\(^4\) See Article 52(1) and (2) EPC.

\(^5\) This is our simplification of the legal provisions intended to limit the exclusion to patentability only when the mentioned cases are claimed “as such”, see Article 52(3) EPC.

\(^6\) T258/03, Hitachi.
2.2 The second hurdle: Only technical features contribute to inventive step

In the second hurdle, once novelty is established, inventive step is examined according to the problem-solution approach as consistently used at the EPO. This approach consists in determining the closest prior art, i.e. the most promising starting point for arriving at the claimed invention, and then determining the features distinguishing the claim over the closest prior art. A technical effect is then identified from the distinguishing features and a technical problem is formulated; this problem is called objective, since it results from the assessment of the overall prior art rather than being based on the inventor’s subjective evaluation. The golden rule to follow when formulating the objective technical problem is that it shall never contain any of the distinguishing features in order to avoid hindsight. This is depicted in the left part of the figure below.

However, when it comes to CII, the problem-solution approach is modified in what is known as the COMVIK approach, as illustrated in the right-hand side part of the figure below. In more detail, all features that are deemed not to have technical character - even if novel - are disregarded for the question of inventive step, and are in fact inserted into the objective technical problem as a given constraint that has to be met by the skilled person when solving the problem. Examiners then determine whether the remaining features of the claim are obvious or not, starting from such a technical problem and the closest prior art.

This may be puzzling to those who have just started dealing with CII at the EPO, since it is in derogation of the golden rule. The EPO rationale is, however, that inventive step shall be acknowledged only based on features that relate to technology.

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Left in figure, an illustration of the standard problem-solution approach (PSA); right, how it is modified when assessing computer-implemented inventions.

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6 The definition can be found in the Guidelines: “the technical problem means the aim and task of modifying or adapting the closest prior art to provide the technical effects that the invention provides over the closest prior art”, Part G-VII, S.2.

7 Since it was systematically formulated in T641/10 (COMVIK) and later followed by an increasing number of decisions.
3. When does a feature have technical character?

The EPO has deliberately not given a definition of the term "technical," for the understandable reason that any such definition could become quickly obsolete as technology advances. It is thus often difficult to anticipate whether a feature will be treated by the EPO as having technical character or not. Fortunately, however, the Guidelines provide several examples, and, for mathematical models, two situations in which technicality is recognized.

The first situation relates to a claim directed to a technical application, in particular when it provides a technical effect that serves a technical purpose.

The second situation relates to a technical implementation addressed by the claim, in particular where the mathematical method is specifically adapted in view of a certain implementation in that its design is motivated by technical considerations of the internal functioning of the computer system or network.8

Computational efficiency alone does however not suffice to confer technical character, unless it can be related to a technical application or implementation.

In the below table, we provide a simple example to more concretely show how the two hurdles and technicality may be treated by the EPO.

<table>
<thead>
<tr>
<th>Claim</th>
<th>Hurdles passed?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A method including a step of processing formula f(x).</td>
<td>1st hurdle: NO</td>
<td>Claim not eligible to patent protection, since it relates to a mathematical method and includes the mental step of calculating the formula.</td>
</tr>
<tr>
<td>A computer-implemented method including a step of processing formula f(x).</td>
<td>1st hurdle: YES 2nd hurdle: NO</td>
<td>First hurdle passed, since the method is implemented on a computer, which is a technical means. Second hurdle failed, because formula f(x) is not technical. Formula f(x) can thus appear in the objective technical problem. The solution is not inventive, since the central part of the claim is included in the problem to be solved.</td>
</tr>
<tr>
<td>A computer-implemented method including processing formula f(x) and using the result of formula f(x) to compress a digital image.</td>
<td>1st hurdle: YES 2nd hurdle: YES, first situation</td>
<td>First situation satisfied because claim relates to compression of images, which is a technical application/purpose having the technical effect of reducing storage space. Claim assessed based on standard problem-solution approach.</td>
</tr>
<tr>
<td>A computer-implemented method including processing formula g(x) and processing a digital image by using formula g(x). [description explains that g(x) has been conceived based on how a certain processor works]</td>
<td>1st hurdle: YES 2nd hurdle: YES, second situation</td>
<td>First situation not satisfied: No limitation to a technical application/purpose, since using formula g(x) may produce an aesthetic filter on a face (e.g. avatar). Second situation satisfied: g(x) is based on the functioning of a processor, so technical knowledge of how a computer works is required. Claim assessed according to standard problem-solution approach.</td>
</tr>
</tbody>
</table>

8 See Guidelines G-VII, 3.3.

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4. What about technical character of AI inventions?

What has been illustrated above applies also to AI and ML, being a sub-set of mathematical models.

According to examples provided in the Guidelines, using a trained neural network to classify images based on low-level attributes of the image, like e.g. edges or pixel attributes, represents a technical application of a classification algorithm and is thus technical.

However, classifying text documents based on e.g. grammar rules or meaning of interrelated words will likely not be considered technical. If the text documents are instead classified based on a specific way motivated by technical considerations of the underlying computer, then technicality may be acknowledged.

Moving to other fields, using neural networks to process physiological data like heart rate to automatically detect an irregular state is regarded as a technical purpose. Similarly, using AI/ML for autonomously driving a vehicle or controlling an industrial process may be regarded as directed to a technical application.

5. Off-the-shelf AI using big data: What are the chances of being technical?

The question becomes more complex in cases where off-the-shelf AI or ML models are used on certain datasets that do not directly relate to technical parameters or to a specific technical purpose, yet producing a useful output in a reliable and computationally efficient manner. Often, it cannot be analytically and systematically explained why the solution is advantageous, such that it might be difficult to demonstrate the presence of technical character. Based on current EPO practice, technicality may thus not be easily acknowledged.

However, before concluding that the invention is not technical, it may be worth investigating, especially with the inventors and preferably when drafting the patent application, whether the useful and reliable output may be shown by means of experimental data such as the results of comparative tests. We will name this type of inventions “empirical AI”.

Established jurisprudence on empirical findings is available in the chemical field, but we are not aware of comparable case law in the AI field. We will thus explore whether and how far empirical evidence may support also the patentability of AI/ML inventions, in the light of available case law, starting with the issue of sufficiency of disclosure in AI in the next issue of HOFFMANN EITLE Quarterly.

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Marking Your IP Territory

IP legal frameworks often fail to mention IP marking for patents and designs, or instead include provisions with an accompanied uncertainty originating from a lack of established case law.

Where such provisions explicitly exist, IP marking may be of strategic benefit if its execution can successfully navigate the often-strict criminal provisions against unfair marking practices.

Virtual marking may provide several advantages over traditional patent marking.

I. An Introduction to Patent Marking

Given the substantial human and financial resources which are readily invested into obtaining a strong IP portfolio, it is sensible to ensure its maximum monopolistic value is leveraged. By law, product marking is one way in which IP proprietors can achieve this. Although it is not compulsory in most European jurisdictions (including, but not limited to, Germany, France, Spain, Switzerland and Ireland), patent or design marking may be beneficial in some instances. Whilst the absence of marking does not directly affect the possibility of claiming damages, or the amount claimable, patent marking may have dual advantages in both enhancing product marketing and ensuring that competitors are aware of existing IP protection. In the event of patent or design infringement, IP marking can reduce, or eliminate, the possibility of an infringing party successfully claiming innocence as a tactic to restrict any available remedies.

Patent marking can be broadly divided into two types: direct patent marking and indirect patent marking. Direct patent marking concerns permanent marks on a product, such as via engraving, stamping or impressing, and is the type of patent marking which is often explicitly referred to in legislation. Indirect patent marking concerns non-permanent marks on the product, including printed labels, and marks on items associated with a product, such as on the product’s packaging or in the product’s documentation. Multiple European jurisdictions, such as Germany, France and Switzerland, explicitly allow for this. However, others do not, such as Spain and Ireland. Further still, some jurisdictions have legal uncertainty regarding the extent of the protection which indirect marking confers, such as in the UK.

Nonetheless, indirect marking can provide an ease in updating IP rights and offers greater degrees of creativity and flexibility in marking.

The traditional means of patent marking, either direct or indirect, is the inclusion of the word to the effect of ‘patented’ alongside relevant IP information, such as the patent number. In Europe, two examples are the UK, wherein the mark must comprise of the word “patent” or “patented” followed by the patent number, and Germany, wherein it is suggested the mark comprise “patentiert”; “patentrechtlich geschützt”; “patented”; “Pat.”; “pat.” or “int. Pat.” (the latter mark in the event the patent has been granted both in Germany and in another country). The nuances of the required markings vary per jurisdiction, so it is important to ensure your products follow the most up-to-date guidance.

II. Virtual Marking

As an alternative means to patent marking, either direct or indirect, one may convey the relevant IP information via the use of links, such as hyperlinks or QR codes, to a website with clear information on the associated IP rights and registrations. This ‘webmarking’, ‘e-marking’ or ‘virtual marking’ (as it is known in the US) is seldom explicitly referred to in legal provisions and, as such, its applicability varies per jurisdiction.
Nonetheless, virtual marking is growing in prevalence and is more cost-effective, flexible and transparent. It may reduce printing or engraving costs for businesses and individuals alike, ease the marking of smaller products, enable instantaneous update of the IP information attributed to the product and provide aesthetic alternatives to the markings. The US were the first to introduce virtual marking explicitly into law with the §287(a) amendment to the Leahy-Smith America Invents Act (AIA) in September 16, 2011. The UK has the most explicit legal reference to e-marking on the other side of the Atlantic under the Patents Act Section 62 and the UKIPO Business Guidance for Webmarking of Products Protected by Registered Designs and Patents, laws of which came into effect from October 1, 2014 and October 1, 2017 onwards, for patents and designs, respectively.

There may be several intricacies in those jurisdictions with explicit laws on webmarking. In the UK for example, such guidance includes Brexit-related amendments relating to the explicit disclosure of protection not extending to Registered Community Designs. Current provisions additionally require the website link to be free and to clearly associate the product with its design or patent number (i.e. a generic company website is insufficient). As such, advice specific to a given jurisdiction should always be sought before using virtual marking.

III. Is Patent Marking Worth It?

There are often criminal provisions regarding false or incorrect information on products relating to ownership of IP rights, such as under unfair competition or local tort laws (in the UK, under Section 5 of the Consumer Protection from Unfair Trading Regulations, or Section 3 of the Business Protection from Misleading Marketing Regulations; in France under Article 1382 of the French Civil Code). For example, in the UK and Germany, using IP markings for expired IP rights (i.e. revoked/expired patents) - or IP rights owned by third parties - will fall under criminal provisions.

Thus, when considering if IP marking would be beneficial, the aforementioned factors must be carefully considered on a case by case basis. This is especially key when it is sought to use standardised IP markings which cover a variety of jurisdictions, and where the product lifetime may exceed the term of IP protection. As the risks in incorrectly marking products are significant, patent marking should only be used after development of a coordinated strategy made under guidance of IP professionals across all jurisdictions of concern.

IV. Conclusion

Marking products with IP rights is a strategic choice which must balance the potential benefits with the strict provisions against improper marking. Where the choice is made to use IP marking, virtual marking and indirect marking should be considered, as these often bring various advantages over direct product marking using traditional means.
Will the EUIPO Lower Its Threshold for Assessing Word Marks on Absolute Grounds?

In the past few years, it appeared that the EUIPO’s examination of word marks on absolute grounds has been continuously strict. Last year, however, the General Court of the Court of Justice of the European Union handed down two decisions that provide hope for a somewhat more liberal approach by the EUIPO.

In its ruling of June 19, 2021 in case T-130/20 Philip Morris Products SA v EUIPO, the General Court considered the word mark “SIENNA SELECTION” as sufficiently distinctive and not descriptive.

The case began in 2018, when Philip Morris Products SA filed the word mark “SIENNA SELECTION” with the EUIPO for goods in Class 34 (including tobacco, tobacco products, tobacco substitutes, cigarettes and vaporizers). Registration was refused in 2019 and this decision was upheld by the Board of Appeal on the grounds that the sign was merely descriptive with regards to the intensity and flavor of the (tobacco) goods covered, as “Sienna” would denote a yellow to reddish-brown color pigment and would be understood as showing a degree of intensity of the taste or flavour of the goods concerned or of their nicotine content. The assessment was inter alia based on the finding that there is a practice in the tobacco industry to describe the degree of taste intensity of nicotine content of the goods covered by the mark, using a certain colour code. As a result, the name would lack distinctiveness for the goods at issue.

Philip Morris brought an action before the General Court of the European Union. The General Court firstly confirmed the finding of the Board of Appeal that the word element SELECTION would either designate the selection process or the selection as such and would thus be considered as an indicator for quality. However, it found that the Board of Appeal erred in its finding that, as a result of normal market practice in the tobacco industry, the relevant public would perceive the term ‘sienna’ as referring to the taste intensity or nicotine content of the goods.

Therefore, the Court found that the sign SIENNA SELECTION, without taking into account any further information, did not allow any conclusion to be drawn as to the intensity or taste of the goods. Further, it would be impossible to infer a characteristic of those goods without making a complex mental elaboration.

In addition, the sign “SIENNA SELECTION” was not considered as a customary name in trade and a possible future descriptive meaning was considered as hypothetical. All in all, the mark “SIENNA SELECTION” was thus considered as sufficiently distinctive and not descriptive. The decision of the Board of Appeal was therefore annulled.

In its decision of October 6, 2021 in case T-3/21 Power Horse Energy Drinks GmbH v EUIPO, the General Court considered the word mark “UNSTOPPABLE” as sufficiently distinctive and non-descriptive, in particular for nutritional supplements and energy drinks.

In 2018, the company Power Horse Energy Drinks GmbH initiated invalidity proceedings against the word mark “UNSTOPPABLE” which was registered in 2016 in the name of Robot Energy Europe including nutritional supplements in class 05 and energy and sports drinks in class 32.

The Board of Appeal rejected the request for invalidity with its decision of December 4, 2019, against which Power Horse Energy Drinks GmbH brought an action before the Court of Justice of the European Union (General Court).
The General Court did not follow the argumentation of the Applicant that the relevant public would infer from the term "unstoppable" the advertising and promotional message that the inherent characteristics of the product would mean that consumers of those very products are "unstoppable".

Even if the consumption of substances such as caffeine, sugar or vitamins, which may in fact be contained in the goods in question, may have a stimulating effect on the performance and energy levels of consumers, it cannot be established that the contested mark has that effect. Instead, the contested mark would be capable of triggering a cognitive process in the target public which would make it memorable and, consequently, would enable the public to distinguish the goods covered by the contested mark from those of a different commercial origin.

Therefore, the request for invalidity was rejected in its entirety.

As in many cases, including these two decisions, arguments can be found which would justify a decision with the opposite outcome: “SIENNA SELECTION” could be considered as descriptive by e.g. referring to a selection with a reference to the Italian city Siena, whereas “UNSTOPPABLE” could be considered as directly conveying the message that the consumers of these products cannot be stopped, making it directly descriptive.

Still, the fact that the General Court considered both trademarks as not descriptive and sufficiently distinctive provides hope for a somewhat more liberal approach of the European trademark institutions in assessing word marks on absolute grounds.

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The “metaverse”

In 1992, American writer Neal Stephenson coined the term “metaverse” in his novel Snow Crash to refer to a virtual world inhabited by 3D avatars of real people.

For some years now, anyone with an internet connection can access the metaverse, which is actually made up of different metaverses accessible on different virtual reality (VR) platforms. In 2021, when Mark Zuckerberg introduced the new company brand “Meta” and announced that the company had been building its own metaverse, other VR platforms were already accessible to the public, such as “Somnium Space”, available since September 2018, “Decentraland”, available since February 2020, and “Sandbox”, which started as a game in 2012 and entered the metaverse in November 2021.

The “metaverse” as a new market

On VR platforms users can move, interact with other users and have all sorts of experiences, such as playing, working and even buying a wide range of products, like works of art, virtual dresses and accessories for their avatar and even virtual houses, as well as other digitally produced goods. This is possible thanks to “non-fungible tokens” (NFTs), which have opened up a whole new market in the metaverse by associating a digital product with a certificate of ownership and authenticity of the source.

The new “metaverse” market is rapidly growing, thanks to the "non-fungible tokens" (NFTs) that make it possible to sell any good in digital format. The sales opportunities offered by the metaverse inevitably expose IP rights holders to new risks, and it therefore becomes necessary to develop defensive strategies.

The most popular luxury brands were the first to seize this market opportunity, and the phenomenon rapidly expanded.

In 2021, Dolce & Gabbana offered a unique collection called “Genesis” made up of nine items of clothing and digital jewellery in NFT format. In the same year, Pizza Hut launched a “1 Byte Favourites Pizza” as “non-fungible pizza (NFP)”, while the company e.l.f. launched the first in a series of “Crypto Cosmetics” in NFT format, and J.P. Morgan created a virtual lounge in Decentraland.

More recently, in February 2022, Axa France claimed “[..] to have secured a plot of virtual real estate on the Metaverse [..]” and, in April 2022, Nike launched its first collection of shoes for the metaverse called “Cryptokicks” in NFT format.

Trademarks in the “Metaverse”

Non-fungible token (NFT) as a new frontier for intellectual property

The sales opportunities offered by the metaverse inevitably open a new frontier for intellectual property.

On the one hand, the NFTs being non-fungible seem to prevent counterfeiting. Moreover, NFTs can be used to trace the origins of physical goods and verify their authenticity, as with the platform “Aura” created in 2019 by LVMH in collaboration with Microsoft and the blockchain software company ConsenSys, which was subsequently joined by other luxury brands including Bulgari, Cartier, Hublot, Louis Vuitton, and Prada.8

On the other hand, an NFT may infringe intellectual property rights of third parties, for example if it reproduces physical goods or uses identical or similar trademarks without the authorisation of their owners.

In view of this risk, the European Commission is assessing the need to regulate the new market in the metaverse, as confirmed by the EU’s digital chief Margrethe Vestager in an interview with Politico in January 2022.9

Between March and April 2022, with regard to the digital market, the European Parliament and EU Member States achieved an agreement on the Digital Markets Act (DMA)10 and on the Digital Services Act (DSA)11 in order to apply the same rules to both the offline and online marketplaces.12

With reference to intellectual property rights defence, Articles 19 and 22 of the agreed Digital Services Act (DSA) provide that online platforms shall take the necessary technical and organizational measures to ensure that notices of infringements, submitted by entities or individuals that have been awarded trusted flagger status under this Regulation, are processed and decided upon with priority and without delay, to ensure traceability of traders.11

The rationale behind these rules is to ensure a reliable environment for consumers, for competitors and for intellectual property rights holders, by discouraging traders from selling products in violation of the rules.

In the US, the first trademark infringement lawsuits against the production and sale of NFTs in violation of intellectual property rights are already underway.

Hermès recently sued an artist who created NFTs resembling the Hermès bags and attempted to sell them online under the trademark “Metabirkin”, while Nike filed a lawsuit against StockX for selling virtual shoes (as NFTs) using Nike’s trademarks without consent.

In the absence of laws or case law in the EU and the US, whether intellectual property rights on physical products can also be extended to the metaverse is controversial because of the difference between physical and virtual products. This difference is particularly important for trademarks, whose protection generally only extends to the goods and services claimed in the relevant registration and to those that are similar or connected to them.

In the EU, it may be argued that this does not apply to the most popular trademarks, because they could benefit from their “reputation”, extending their protection to goods and services which are not similar to those for which they are registered. In this case, it will be necessary to prove that “the use without due cause of the trademark applied for would take unfair advantage of, or be detrimental to, the distinctive character or the repute of the earlier trademark” (art. 8 par 5 EUTMR).

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9 “- We should start thinking about it now-, Vestager said, adding that the likely increase in the use of so-called non-fungible tokens, or NFTs, within the metaverse could also be an area to follow closely.” Samuel Stolton, 18 January 2022. Politico “Vestager: Metaverse poses new competition challenges.” Available at: https://www.politico.eu/article/metaverse-new-competition-challenges-margrethe-vestager/. Accessed June 2022.
Possible defensive strategies

In this developing market, both trademark owners intending to start producing and selling their own NFTs and those intending to enter, or who are already in, the metaverse need to consider protecting their intellectual property rights in this new space, by developing a targeted defensive strategy adapted to their business.

Among the possible defensive actions, trademark owners should consider, first, extending the protection of their trademarks to virtual products and services to prevent registration by third parties, and, second, monitoring the use of their trademarks on virtual reality platforms to detect and challenge unauthorized uses.
Opting Out but Staying In –
The Risk of Ineffective Opt-Outs
From the UPC

After several setbacks and delays, the Unified Patent Court ("UPC") is finally expected to start its operations in the last quarter of 2022 or early 2023. The UPC will enable patentees to enforce their existing patents with one decision covering all UPC member states for which the European patent has effect, but it will also allow for a central attack on that patent's validity. For a transitional period of (at least) seven years, the UPC will share jurisdiction for existing or future nationally validated European patents with the respective national courts of the UPC Member State, unless the patent proprietor opts out of the jurisdiction of the UPC in its entirety. An opt-out will only take effect if recorded in the register kept by the UPC Registry, with the caveat that an application for an opt-out is no longer possible once an action has been brought before the UPC. A three-month “sunrise period” offers patentees a head start to opt out their patents before the UPC opens its doors and competitors have a chance to initiate a central revocation action.

Patentees may decide to opt out entire portfolios or only their more valuable patents to ensure that they cannot be easily invalidated in a central revocation action before the UPC. In either case, patentees need a good overview of the patents they want to opt out. This is because an opt-out can only be effectively declared by or on behalf of the actual proprietor(s), i.e. the person(s) which is/are entitled to be registered in the national patent registers, or, in case of the opt-out of a European patent application, the European Patent Register at the EPO.

Opt-out applications should be carefully reviewed before filing as patentees could still find themselves in a situation in which they have to defend their patent before the UPC although their opt-out has been recorded by the UPC Registry. An entry in the register alone will not shield a patent from invalidity proceedings at the UPC and, if deemed to be ineffective, any subsequent decision as to the merits. Procedurally, when examining the formal requirements of an infringement or revocation action, the UPC Registry shall, “as soon as practicable”, check whether an opt-out has been entered into the register for the concerned patent and inform the plaintiff accordingly, who may then withdraw or amend its request. The UPC Registry will not itself refuse service of the action. Rather, it is up to the defendant to challenge the jurisdiction and competence of the UPC based on the opt-out within its preliminary objection. The effectiveness of the registered opt-out will then be tested within the proceedings before the UPC.

To be effective, an opt-out must meet the requirements set forth in Art. 83 UPCA and Rule 5 RoP, i.e. (i) it must be applied for by or on behalf of all actual proprietor(s) of the respective patent or patent application, (ii) the application must be submitted by the proprietor(s), a qualified UPC representative, or another representative such as an in-house patent attorney with a formal mandate, and (iii) the application must fulfill certain formalities.
In particular, the application for an opt-out must include a declaration according to which the persons listed in the application are the actual proprietors of respective patent or patent application.\textsuperscript{10}

It is to be expected that a third party eager to invalidate a patent before the UPC may challenge that all of these requirements were fulfilled, assuming that the facts are sufficient to substantiate reasonable doubts. Doubts as to proprietorship may, for example, be substantiated by reference to documents publicly available from the European Patent Register or any other national patent register. Conversely, for the patentee it may not in all circumstances be easy to clearly identify the actual proprietor(s). For example, it is not uncommon for company groups to assign worldwide patent families or even patent portfolios within the group, either through specific assignments or as part of various collaboration agreements. As these agreements are within the group of companies, they may not have been legally scrutinized for their effectiveness under all relevant jurisdictions, and assignment may not even be stringently recorded in all relevant patent registers. Moreover, one patent may be owned by multiple proprietors or different national parts of a European patent may be held by different persons. The problem becomes even more complex considering that the UPC asks the opt-out to be declared in respect of all EPC member states for which the patent has been granted.\textsuperscript{11}

How the UPC will handle cases in which an opt-out has been declared by or on behalf of only some or even the wrong persons remains to be seen. To avoid unpleasant surprises with respect to their most important patents, patentees should thus confirm the chain of ownership and arrange for an individual solution, if necessary.

In contrast to the above, consent by licensees, irrespective of whether the license is exclusive or non-exclusive, is not a requirement for a valid opt-out. Still, declaring or even not declaring an opt-out without consent or at least without notifying the licensee may constitute a breach of (implied) duties under the license agreement. License agreements will often not address the obligations of the patentee in the specific situation of an opt-out and the interpretation of more general wording may differ depending on the law applicable to the license.

\textsuperscript{10} Rule 5(3) RoP foresees that the application for an opt-out shall contain: (a) name and address of each proprietor, (b) name and address of the appointed representative and that person’s mandate, if applicable, (c) details on the patent / patent application number, (d) details on any granted supplementary protection certificate, if applicable, and (e) a declaration by or on behalf of each proprietor that he is entitled to be registered in the national register.

\textsuperscript{11} This follows from the Opt-Out Document Template provided by the UPC, whereas the current Rule 5(1) lit. b RoP refers only on the UPC Member States for which the patent has been granted. We understand that a further amendment to the RoP is discussed before finalization.
The ECJ Rules on the Requirement of Validity of the Asserted Patent in Provisional Injunction Proceedings

European Court of Justice (ECJ), judgment dated April 28, 2022 (Case no. C-44/21)

The ECJ held that it would violate European Union law if preliminary injunctions (PI) in patent litigation were generally refused unless the validity of the patent-in-suit has previously been confirmed in validity proceedings, at the least at first-instance. More specifically, it held that:

“Article 9(1) of Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights must be interpreted as precluding national case-law under which applications for interim relief for patent infringement must, in principle, be dismissed where the validity of the patent in question has not been confirmed, at the very least, by a decision given at first instance in opposition or invalidity proceedings.”

The ECJ further stated that any national case law that conflicts with its holding has to be amended accordingly.

1. Facts

The judgment is based on a request for a preliminary ruling on the interpretation of Article 9(1) of Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights (Enforcement Directive). Article 9 of the Enforcement Directive is entitled “Provisional and precautionary measures” and inter alia provides:

“1. Member States shall ensure that the judicial authorities may, at the request of the applicant:

(a) issue against the alleged infringer an interlocutory injunction intended to prevent any imminent infringement of an intellectual property right, or to forbid, on a provisional basis and subject, where appropriate, to a recurring penalty payment where provided for by national law, the continuation of the alleged infringements of that right, or to make such continuation subject to the lodging of guarantees intended to ensure the compensation of the right holder; [...]”

The Regional Court Munich I considered the patent-in-suit to be infringed and valid. However, the court considered itself to be prevented from granting a PI in view of the case law of the Higher Regional Court Munich which it understands to prevent a PI unless the patent-in-suit has been confirmed in nullity or opposition proceedings and asked the ECJ whether this violates Article 9(1) of the Enforcement Directive.

2. ECJ decision

The ECJ clarified that a PI cannot be withheld only because there is no decision in a nullity or opposition proceeding confirming the validity of the patent-in-suit.

In its reasoning the ECJ stated that European patents enjoy a presumption of validity from the date of publication of their grant and enjoy the full scope of protection under the Enforcement Directive.
The ECJ also referred to the safeguards available to the alleged infringer under Article 9 of the Enforcement Directive against interim measures, i.e. revocation upon the request of the defendant if the applicant fails to institute main infringement proceedings within a reasonable period; subjecting a PI to the lodging of an adequate security by the applicant; and ordering the applicant to provide compensation to the defendant for any damage caused by a provisional measure.

3. Impact

In Germany, the case law of the Higher Regional Courts Dusseldorf and Karlsruhe (the court of appeal for the Regional Court Mannheim) did not require that the validity of the patent-in-suit has been confirmed in nullity or opposition proceedings as a precondition for granting a PI. Although these courts considered that if a patent has already been confirmed in nullity or opposition proceedings its validity can generally be deemed to be “sufficiently certain” for granting a PI, this was not a strict requirement. Their case law has established several examples where a PI can be granted without a confirmatory judgement in validity proceedings. It has also been made clear that these examples are not exhaustive and that courts can grant PIs in other cases where the validity of the patent-in-suit is sufficiently certain for other reasons. This case law was summarized by the Higher Regional Court Dusseldorf in the 2010 decision Harnkatheterset.3

For a long time, the Higher Regional Court Munich had applied a different, notably less strict, standard for assessing the validity of the patent-in-suit in PI proceedings. This case law changed in 2019 in the decision Elektrische Anschlussklemme.4 Many practitioners understood that the Higher Regional Court Munich simply adopted the case law of the courts in Dusseldorf, Mannheim and Karlsruhe. However, it was noted that the list of examples where a PI can be issued without the patent-in-suit having been confirmed in validity proceedings appeared to be final in the decision of the Higher Regional Court Munich.

Now, the ECJ has held that a confirmation of the patent-in-suit in validity proceedings cannot per se be required for a PI. The ECJ decision did not state that it would also violate European Union law to require that the validity of the patent-in-suit be “sufficiently certain” for granting a PI or that national courts are precluded from assessing patent validity. Based on recent remarks of one of the judges from the Higher Regional Court Dusseldorf, it can be expected that the Dusseldorf courts will not change how they assess validity in PI proceedings. However, it is unclear whether other courts may change their practice in view of the ECJ decision, e.g. by adopting a more patentee-friendly approach that allows PIs in more situations or by assessing validity on a case-by-case basis as it was done before the decisions Harnkatheterset and Elektrische Anschlussklemme. In light of the importance of the patent’s validity for deciding on a PI request, this decision will not be the end of the line.

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3 Higher Regional Court Dusseldorf, InstGE 12, 140 – Harnkatheterset.
4 Higher Regional Court Munich, GRUR 2020, 385 – Elektrische Anschlussklemme.