Germany's patent law and High-Tech Strategy 2025: Implications of recent amendments to § 139(1) Patent Act for innovative SMEs, start-ups and research organisations

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A robust patent protection system is of enormous importance for sustainable innovation. More specifically, companies' financing, commercialisation of their technologies and also their competitiveness depend on it. It is in this context that this paper examines the extent to which amendments to § 139(1) of the German Patent Act (PatG) regarding protection against patent infringement could have an impact on Germany's innovation plans. The paper concludes that interpretation of the recent disproportionality defence introduced to the PatG appears in line with the importance of patents and the long-term innovation strategy of successive German governments - currently reflected in the goals of the High-Tech Strategy 2025. In this way, both a competitive and sustainable innovation ecosystem, and German SMEs, can be promoted.

Introduction

In its report "Research and Innovation 2018", the German Federal Ministry of Education and Research (BMBF) rightly points out that "only an innovative country can offer its citizens quality of life and prosperity".[1]

However, an innovative nation with a leading, dynamic and highly competitive market can only exist on the basis of a well thought-out strategy. In order to be effective, such a strategy always requires cooperation between the private and public sectors. In Germany, this strategy is called "High-Tech Strategy 2025" (HTS 2025)[2] and is being promoted by the BMBF.

The underlying philosophy of the HTS 2025 is that more and stronger partnerships will accelerate sustainable innovation. This in turn should help Germany lead in (and with) next generation technologies – thus increasing employment and raising the standard of living.

These partnerships now involve multidisciplinary approaches taken across the Federal Government ministries, industry, research organisations, universities and the public. HTS 2025 provides for 'the coordinated support for innovation', requiring public and private financial investment to achieve a variety of projects across multiple sectors. In this context, the Federal

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1 See BMBF, Federal Report on Research and Innovation 2018, Short Version, at page 1: https://www.bundesbericht-forschung-innovation.de/files/Publikation-bufi%202018%20Short%20version.pdf [06. 07.2023].

2 https://www.bmbf.de/SharedDocs/Publikationen/de/bmbf/FS/31538_Forschung_und_Innovation_fuer_die_Menschen_en.pdf?__blob=publicationFile&v=7 [06.07.2023]. For a German Federal Government report on the HTS 2025, see https://www.bmbf.de/SharedDocs/Publikationen/de/bmbf/FS/657232_Bericht_zur_Hightech-Strategie_2025_en.pdf?__blob=publicationFile&v=2 [07. 07.2023].

Government is looking to have industry as a strong partner - in particular, Germany's small and medium-sized enterprises (SMEs).

Consistent with the European Union's twin transition to "digital" and "green" under its Updated New Industrial Strategy,[3] HTS 2025 focuses on digitalisation (Economy and Work 4.0) and the environment - as well as health, energy, mobility and security.

While Germany continues to be strong in the manufacturing sector - especially in specialist areas – this article looks at various aspects of a successful and sustainable innovation-led economy. A proven way to ensure investment in innovation is to foster and protect valuable assets in the form of intellectual property (IP).

The linchpin of innovation promotion is therefore a strong IP protection system. This article examines the importance of strong IP protection, especially for start-ups, SMEs and research organisations, and explores the extent to which recent amendments to § 139(1) of the German Patent Act (PatG) regarding protection against patent infringement could jeopardise Germany's innovation plans if courts were to apply the new rules unwisely.

Digital transformation for SMEs

Never before has there been so much investment in innovation-strong initiatives. Germany continues to exceed the targets set by the European Union in terms of the ratio of national research investment to gross domestic product (GDP).[4] The goal is to increase research and development spending in Germany to 3.5% of GDP by 2025.

The German Mittelstand, which includes SMEs and start-ups, accounts for more than 99% of all companies and more than 50% of Germany's economic output. SMEs generate 60% of all jobs and contribute to about 35% of corporate turnover in Germany.[5] SMEs and start-ups are the driving forces of the economy. As they are active in a wide range of sectors, the German economy is not dependent on a small number of large (dominant) market players to ensure its success. Rather, SMEs, which often include family-run businesses, are in a symbiotic relationship with other actors in the innovation ecosystem.

Because of their enormous importance for the German economy, the Federal Government aims to support and foster SMEs. One example is the "SMEs Digital" program of the Federal Ministry for Economic Affairs and Energy, which provides information and specific support through numerous "Mittelstand 4.0" centres of excellence. The aim of the program is to facilitate training to help SMEs become more efficient, flexible and customer-focussed, and to refine their production and business models. It is not just about increasing profits. Maintaining relevance, better engagement with customers, reaching new markets, remaining 'state of the art' and staff satisfaction are reported as aspirations from the Mittelstand in sectors as diverse as bakeries, tool making, biotechnology, medical technology and the maritime economy.

Beyond the How to the What – IP to grow business and enable Innovation

The Mittelstand is renowned for success in specialised niche markets, in particular digitalisation and clean energy solutions.

Consequently, the Mittelstand actively participate in the broader innovation ecosystem. This

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3 https:// ec.europa.eu/commission/presscorner/detail/en/IP_ 21_1884 [06.07.2023].

4 https://www.gtai.de/en/invest/business-location-germany/rd-framework/r-d-spending-in-germany-at-record-levels—579072 [06.07.2023].

5 https://www.bmwk.de/Redaktion/EN/Dossier/sme-policy.html; https://www.bmwk.de/Redaktion/EN/Publikationen/Mittelstand/smes-digital-strategies-for-digital-transformation.pdf?__blob=publicationFile&v=1 [06.07.2023].

brings enormous advantages. SMEs provide great input into the value chain of large companies. In 2014, more than 42 % of SMEs in Germany brought products or processes to market (in Europe, the average for SMEs is below 30 %).[6]

A study by the European Patent Office (EPO) and the European Union Intellectual Property Office (EU IPO) on innovative industries provides empirical evidence of the importance of highly innovative companies for the European economy and thus also of the importance of IP protection:[7]

- IP-intensive industries generated 29.2% of all jobs in the EU during the period 2014-2016;
- taking indirect jobs into account, the total number of IP-dependent jobs rises to 83.8 million (38.9%);
- over the same period, IP-intensive industries generated almost 45% of total economic activity (GDP) in the EU, worth €6.6 trillion and accounting for most of the EU's trade with the rest of the world - generating a trade surplus and thus helping to keep the EU's external trade broadly balanced;
- IP-intensive industries pay significantly higher wages than other industries, with a wage premium of 47% over other industries; and
- of the biggest EU economies, Germany has the highest shares of patent-intensive employment and GDP.

Very often, German SMEs are located in innovation clusters or hubs. This model includes research organisations, academic sponsors, large and small companies and is usually led by a team that ensures collaboration across the cluster, access to research, business planning and the promotion of innovation. Innovation clusters, while often having a physical footprint in a specific region, regularly include virtual national and international collaborations.

For example, BioRN, the science and business cluster of the Rhine-Main-Neckar region, is one of the strongest biotech hubs in Germany. BioRN covers a region with a radius of 100 km, in which science, industry and government have an ongoing and strong engagement to produce, transfer and create application for life sciences. The cluster recently celebrated its 25th anniversary and currently has more than 130 members: universities, research institutions, ten global pharmaceutical companies (including research and development sites), SMEs, local, regional and federal authorities, the Chamber of Commerce and Industry (CCI) and investors. This impressive line-up explores new ways to transfer results from leading research and academic institutions to industry and local and international markets. Members include Bayer AG, SAP, Fraunhofer, Max Planck, Helmholtz, EMBL, NEC, Roche, Sanofi-Aventis and Thermo Fisher, along with Promega, PosteLab, NovaLiq, Heidelberg University, Mannheim University of Applied Sciences, Gelita Medical and Fluidim. This holistic approach has made it possible to identify key challenges in this sector and focus on overcoming them.

BioLabs Heidelberg recently opened its doors to start-ups. It is a space created primarily for

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6 https://www.bmwk.de/Redaktion/EN/Dossier/sme-policy.html; https://www.bmwk.de/Redaktion/EN/Publikationen/Mittelstand/smes-digital-strategies-for-digital-transformation.pdf?__blob=publicationFile&v=1 [06.07.2023].

7 "EPO-EUIPO Study on the IPR-intensive industries and economic performance in the European Union"; Industry-Level Analysis Re- port, September 2019, Third edition, at page 7. https://euipo.europa.eu/tunnelweb/secure/webdav/guest/document_library/observatory/documents/reports/IPRintensive_industries_and_economic_in_EU_2022/2022_IPR_Intensive_Industries_FullR_en.pdf [07.06.2023]; https://www.epo.org/news-events/news/2019/20190925.html [06.07.2023].

life science companies and designed to provide access to fully equipped laboratories, office space, potential investors, academia and industry, and other entrepreneurs. This should enable a focus on collaborative innovation rather than purely operational business. It is also intended to reduce the risk associated with founding a company in the pharmaceutical sector, namely high long-term costs, high investment, and large patent portfolios. An essential element of this set-up, in addition to management consultancy, is intellectual property services and legal services. "Intellectual property is what a young and promising start-up needs to become successful," says BioRN managing director Dr Julia Schaft. Regardless of the basic willingness to cooperate, the confidential and respectful handling of third-party intellectual property is a central concern of the project.

Jane Ní Dhulchaointigh, inventor and CEO of Sugru, a start-up that has developed a flexible silicone rubber that can be used to repave, modify and repair almost anything, explains the ways in which intellectual property enables start-ups to grow.[8] Ní Dhulchaointigh explains: "Since we invented a whole new product category that would later become the platform technology behind Sugru mouldable glue, and it took years to invent the technology before it became saleable, it was crucial that we could protect our work and investment. [...] As the company grew and our products became successful, there were a number of copycat products over the years. Before that, we protected our business with our patents and trademarks in our biggest markets. [...] Our intellectual property - along with our commitment to the best product quality and our creativity and customer focus - has been a very important tool to protect our business and to remain the market leader in the category of mouldable adhesives that we have created".[9]

Dr Elena García Armada, CEO of Marsi Bionics, a start-up developing wearable exoskeletons for the rehabilitation of children with neurological diseases, sees the patenting of the underlying inventions as one of the most important steps in the rehabilitation of children. She adds: "In an international market characterised by fierce competition, the guarantee of ownership is absolutely necessary. Otherwise, we would be defenceless against other companies that could appropriate the effort that goes into research or invention all these years. The patent protects our competitive advantage."[10]

Dr Martin Schifko, founder of Engineering Software Steyr, a start-up producing precise CAE/CFD/CSD software simulations, emphasises that patents "build trust" and represent "great potential to bring innovations to market through mechanisms such as licensing."[11]

Candela Sancho, co-founder and CEO of Detektia, a start-up specialising in space-based control and monitoring of terrain movements and infrastructure, also sees intellectual property as the basis for protecting investments in research and development (R&D). According to Sancho, intellectual property is key because "if we lose our code, we lose 20 years of work".[12]

Access to venture capital and other sources of finance: Intellectual property and its protection

As in many other industries, both substantial financial resources and lead times are common in the life sciences sector. Both can be addressed in different ways.

In 2021, beLAB2122 was launched, a €20 million multi-year collaboration between Evotec, Bristol Myers Squibb (BMS) and five research institutions in the Rhine-Main- Neckar region.

8 https://www.4ipcouncil.com/4smes#how-do-i-use-ip [06.07.2023].
9 https://www.4ipcouncil.com/features/sugru-patented-formula-fix-world [06.07.2023].
10 https://www.4ipcouncil.com/features/exoskeletons-help-children-neurological-diseases [06.07.2023].
11 https://www.4ipcouncil.com/features/re-envisioning-industrial-design-simulation [06.07.2023].
12 https://www.4ipcouncil.com/features/three-women-entrepreneurs-share-their-journey [06.07.2023].

beLAB2122 aims to bring together leading academic and research institutions - Evotec as a drug discovery and development company and BSM as one of the world's leading pharmaceutical companies. The central aim is to bridge the gap between therapeutic options and practical drug research and early development projects. Ultimately, it is about enabling the creation of new spin-off companies to find a new home for the "Rembrandts in the attic".[13]

Private investment - especially in the form of venture capital (VC) - is indeed becoming more common: between 2014 and 2019, VC investment in Germany almost tripled to around €1.9 billion.[14] "All in all, VC has a significant impact on 90% of companies. An investment enables start-ups to develop further and faster than competitors that are not supported by VC".[15] *Christian Schneider*, managing partner of Vesalius Biocapital and VC manager for 20 years, explains that investors need the clear advice of a lawyer specialised in the field of intellectual property regarding the status of a patent as well as the associated risks in order to decide on an investment.[16]

Private investors, so-called "angels", also consider intellectual property in their decision to support a start-up or SME. As Peter Finnie, IP specialist and partner at Potter Clarkson, explains, "later rounds of funding are likely to be led by VC funds, and they will conduct thorough due diligence on IP and may re-determine valuations if issues are uncovered at this stage to the detriment of angel investors".[17]

Dr Daniel Schaft, a European, Australian and New Zealand patent attorney who works closely with start-ups, also appreciates the value of intellectual property for business financing. Some of the start-ups he regularly advises have filed patents. "You can't get funding or venture capital without intellectual property. There has to be some guarantee of a return and that depends on monopoly rights," he says - and goes on to explain that intellectual property is often too complex or too easy to imitate to protect as a trade secret. Schneider adds: "Often people come with trade secrets. We say, well, trade secrets. What happens if one of your employees leaves? Then your trade secret also goes out the door. That's not acceptable to us, so we need patents."[18]

Ownership of intellectual property is not enough, however. Venture capitalists usually see the protection of intellectual property as a central part of their business plan. Only efficiently protected intellectual property rights represent significant economic assets.[19] Start-ups also recognise the importance of protecting intellectual property rights. Maria Mazo Oscoz, Associate Operations Manager at Empatica, a full-stack digital health start-up, explains that "protecting our intellectual property means that our technology and innovations are harder to imitate, which helps us maintain a competitive advantage. At the same time, knowing that our inventions are protected allows us to invest more resources in research and development." Dr Alex von Frankenberg, managing director of High Tech Gründerfonds, finds that "[p]atents are often a

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13 Kevin G. Rivette / David Kline, *Rembrandts in the Attic: Unlocking the Hidden Value of Patents*, 1999, Harvard Business Review Press.

14 https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-Studien-und-Materialien/PDF-Dateien-Paper-and-Proceedings-(EN)/KfW-Venture-Capital-Studie-2020_EN.pdf [06.07.2023], p. 3.

15 https://www.investeurope.eu/media/2829/thevcfactor.pdf [06.07.2023], p. 30.

16 4iP Council Webinar, Intellectual property from the perspective of a venture capitalist, 21 Nov 2019, https://www.4ipcouncil.com/research/webinar-intellectual-property-perspective-venture-capitalist [06.07.2023].

17 https://www.angelnews.co.uk/blog/angel-investment/ip-considerations-for-angel-investors/ [06.07.2023].

18 https://www.angelnews.co.uk/blog/angel-investment/ip-considerations-for-angel-investors/ [06.07.2023].

19 https://www.wipo.int/wipo_magazine/en/2021/02/article_0006.html [06.07.2023].

tool to protect an idea from attack and has an impact on all discussions between start-ups".[20]

The role of patents in the innovation ecosystem

Patents are seen throughout industry as an indicator of high innovation performance. The ability to maintain robust patent portfolios and have legally protected intellectual property is seen as an essential factor for the competitiveness and commercialisation of a technology. When asked "Why?", Dr Julia Schaft answered without hesitation: "It is a given that intellectual property has value". If this value is not protected, there is no investment.

However, the value of a patent does not result from its entry in the register, but only from the respect it is accorded in the market. The latter depends crucially on whether the patent is enforceable and, if so, protected. This brings us to the most recent "modernisation of German patent law" and the role of injunctive relief.

Amendments to the German Patent Act based on patent troll narratives

In August 2021, the Second Patent Law Modernisation Act (PatModG) came into force in Germany, which - among other things - added a disproportionality defence to a claim for injunctive relief under §139 (1) PatG. According to this, the claim for injunctive relief under patent law can be excluded by way of exception, if:

- due to the specific circumstances of the individual case (i.e. not as a general rule) and considering the principle of good faith;
- the claim would cause 'disproportionate' hardship for an alleged infringer or a third party;
- beyond what is justified by the exclusive right.[21]

The "new" regulation is surprising insofar as proportionality was already legally anchored as a general principle of German private law in § 242 BGB, and case law had already specifically recognised its relevance with regard to patent law injunctive relief[22] - so that the most recent amendment actually seems superfluous. However, this patent law reform was partly triggered by a narrative about patent trolls. Yes, this is indeed the term that was used during the parliamentary debate.

Despite the indisputably positive effects of a strong IPR protection system, there has been increased sentiment in recent years against companies that have been designated as Non-Practising Entities (NPEs) or "Patent Assertion Entities". This refers to companies that own patents but do not themselves implement the invention protected by these patents in products, but instead exploit the patent themselves in a legal manner. Some critics of this form of technology transfer generally describe NPEs as aggressive market participants and consider them to be harmful to innovation. The accusation is that they abuse patents in order to threaten producing companies with injunctive relief and thus force them to pay excessive licence fees. However, so far there is neither a case known to the courts nor empirical data that would prove that NPEs harm the German innovation landscape in any way. On the contrary, there is strong evidence that NPEs have an important function in the German innovation system.

Experience and empirical data alike prove that the impact of NPE on innovation is consistently

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20 https://www.4ipcouncil.com/features/race-ahead-commercially-and-keep-making-product-better-and-better-and-better [06.07.2023].

21 Some commentators consider that the amendment to §139 PatG may not apply to patents that are standard essential and subject to a voluntary "FRAND commitment". This is because the principle of proportionality is built into the relevant "FRAND framework" for the licensing of standard-essential IP rights, which is reflected in the judgment of the CJEU 16.07.2015, C-170/13 *Huawei v ZTE*. A summary of this judgment and subsequent national court decisions based on it is available at https://caselaw.4ipcouncil.com/ [06.07.2023].

22 BHG 10.05.2016, X ZR 114/13 – colloquially known as the "Heat exchanger" decision.

positive. Take, for example, the Fraunhofer-Gesellschaft, which has a mandate to serve government, industry and society – and which does not allow it to manufacture. In its 2020 annual report the research organisation reported annual revenues of €2.8 billion, over 600 patent applications filed and the creation of more than 20 spin-off companies. The Fraunhofer-Gesellschaft regularly ranks among the top 10 or top 20 German patent holders and generates around €100 million from licensing income alone, which is reinvested in research and strengthens Germany's reputation for excellence in industrial research.

The Helmholtz Association is another highly respected German applied research institution that successfully shares its technology through a variety of channels, including licensing, start-ups and collaborations.[23]

Success is measured by a number of financial and scientific performance indicators. Take the giant magnetoresistance effect (GMR), which revolutionised computer technology in the 1980s and is now used in most computer hard drives. This patented technology has generated over €10 million in licensing revenue. Professor Peter Grünberg, the GMR inventor, was awarded the Nobel Prize in Physics in 2007. In total, the Helmholtz Association's revenue from technology transfers amounted to around €600 million in 2020 (a similar volume was also recorded in 2019).[24] These revenues are essential as they fuel further R&D investment and thus continuous innovation.

However, the legal exploitation of patents through transfer and licensing is also proving to be an innovation driver in other areas: SMEs and start-ups share their knowledge through licensing of intellectual property rights for a variety of reasons. These include the lack of necessary resources to commercialise their inventions or the decision not to exercise their patents in one or every eligible field. It is by licensing to other companies that the technology can be disseminated (and improved) without diminishing the value of the patent to the owner. Mathieu Baudrit, Head of Research and Development Solar Integration at the German start-up Sono Motors, explains: "We don't want to keep [polymer photovoltaics] only for our vehicles. One possible strategy is to license the right to use our patents to give others the right to make solar-powered vehicles. We have seen a lot of interest from across the transport sector, i.e. truck, rail, marine and automotive. EasyMile, our first licensee, is developing taxi robots like the EZ Passenger Shuttle and will use our patents to further develop its fleet".[25]

However, the economic calculation of licensing presupposes that competitors cannot use the same technology free of charge. When technologies are disseminated through published patents, the availability of enforcing patent protection in a court is therefore indispensable. For example, after unsuccessful licensing attempts, the Fraunhofer-Gesellschaft has increasingly felt compelled to take enforcement action to protect its patents against companies that use its technology without consent. In recent years, the research organisation has initiated infringement proceedings in relation to patents that originate from successful research fields - and which are highly relevant to achieving the "twin transition" towards a digital and green economy in Germany and Europe. Digital media and photovoltaic technologies are the more obvious examples.

Universities, which often have a similar mission to the Fraunhofer-Gesellschaft, use various models to transfer research to industry. Many universities have established commercialisation companies. As a look at the USA shows - for example, the example of Carnegie Mellon's

23 https://www.helmholtz.de/en/transfer/examples-and-successes/licensing/ [06.07.2023].

24 The Helmholtz Association Annual Report 2020, at page 9; https://www.helmholtz.de/fileadmin/user_upload/03_ueber_uns/zahlen_und_fakten/Jahresbericht_2020/20_Jahresbericht_Helmholtz_Zahlen_Fakten_EN.pdf [06.07.2023].

25 https://www.4ipcouncil.com/features/ip-within-panels-sion-solar-powered-e-car [06.07.2023].

lawsuit against Marvell[26] - judicial assertion of intellectual property rights must be used as a tool to fulfil the mission of creating and disseminating knowledge.

The examples show that legal exploitation of patents - as of any asset - is an essential part of the innovation framework. There is no serious reason to assume that this could be abusive *per se*. Likewise for companies that might have a special purpose vehicle to monetise certain IP assets which fall outside its core business – or because commercialising IP is not part of its specialised business activity. It is part of the overall business model of value creation and value capture.

Great expectations

In any innovation ecosystem, the expectation of revenue from commercialisation is one of the essential elements in the allocation of R&D funding as it provides the necessary seed investment for future generation R&D. "The commitment of the [German] federal government to the application of scientific research is unusually strong. Not only does it help fund research institutes such as Fraunhofer [and others - such as Helmholtz, Leibnitz and Max Planck], but it also supports the creation of start-up companies and the licensing of intellectual property to help researchers build careers outside academia."[27] This results in a strong talent pool being nurtured and available. In Germany, there are over 1,000 publicly funded research institutions covering very different fields, from materials science to software development. In addition, there are various R&D centres that are privately funded by business.[28]

The already perceived or foreseeable lack of effective legal instruments to safeguard the results of large, risky and long-term R&D investments will fundamentally affect the willingness or ability to invest in R&D. This could lead to a downward trend in investment and ultimately require significant additional resources to restore a healthy and competitive innovation system.

Great responsibilities

Investors in technology-oriented companies of all sizes want to be sure that intellectual property is protected and that there is freedom of action, in the sense of "freedom-to-operate". The biotech sector is also a good example of this, as very high long-term costs and high investments are at stake. At the same time, there are large patent portfolios in this sector. These are often used to ensure freedom to operate and thus reduce the risk that a project will have to be abandoned. "The reason for this is that there is generally 12 to 15 years before you can generate revenue from biotech patents. By the time the freedom to operate analysis is done, the patents may not have a long life. If there is a risk of infringement, then companies will prefer to drop a project and pursue other opportunities. Patent owners in this sector will rarely sue – they will try to settle before they go to court," says Dr Daniel Schaft.

Conversely, the notification also provides transparency for competitors, as they can adjust their activities early on – i.e. react through work-arounds or licensing. This sector recognises the need to manage intellectual property well and the corporate responsibility to undertake due diligence before a product launch.

That this also applies to other sectors is exemplified by the telecommunications sector, where long-term costs and investments of roughly the same magnitude are at stake. Here, the Federal Court of Justice recently reminded infringing parties that they should exercise due

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26 *Carnegie Mellon University v Marvell Technology Group*, Case No. 2014-1492, 04.08.2015, United States Court of Appeals, Federal Circuit.

27 Savage, "How Germany is winning at turning its research to commercial application: the country is using science for economic benefit", *Nature*, 27.03.2019; https://www.nature.com/articles/d41586-019-00911-6 [06.07.2023].

28 https://www.research-in-germany.org/en/research-landscape. html [06.07.2023].

diligence with regard to intellectual property rights before launching products on the market.[29] The availability of the disproportionality defence in response to a claim for injunctive relief under §139(1) PatG is considered by the Munich Regional Court in Case no. 21 0 11522/21. The Court found that the defendant infringed the plaintiff's patent which is essential to the ETSI Universal Mobile Telecommunications System (UMTS) standard. The defendant asserted that such an injunction would be completely disproportionate to the patent-in-suit's relevance to the overall technically complex products in its devices. The Court held a proportionality defence pursuant to §139(1)(3) may be available to defendants under the PatG in FRAND cases, but only in special exceptional circumstances. The Court assessed the defendant's conduct overall, finding it had been unwilling to enter into a licence. Any economic effect suffered from the injunction would therefore not impact the Court's decision given the defendant had infringed the patent for over a year while having the option of concluding a licence agreement.

The Court provided some guiding principles relating to the disproportionality defence, stating

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[29] BGH 05.05.2020, KZR 36/17 - Entscheidungsstichwort (referred to as *Sisvel v Haier*). See also the recent German Federal Court decision Case X ZR 123/20 particularly at paragraphs 27 – 30 and 34, available at http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&az=X%20ZR%20123/20&nr=132674. The English translation of paragraph 30 being: *Even before starting to sell a technical product, a company must check whether it falls within the scope of protection of third-party technical property rights (Federal Court of Justice (BGH), judgment of 15 December 2015 – X ZR 30/14, BGHZ 208, 182 paragraph no. 114 et seq. If it fulfils this obligation, it is regularly in a position to respond in the required manner to preliminary claims regarding the properties of the product. If it does not fulfil this obligation, this must not be to the detriment of the other party [being the IP owner].* Paragraph 34 further provides that, the fact that a company was not involved in the development of the standard being implemented does not prevent this. The decisive factor, held the court, is that the company distributes such products which indisputably comply with the standard.
English and more broadly the UK courts are also of this view. The court in both the *Optis Cellular Technology LLC v Apple Retail UK Ltd & Ors* Trial F [2021] EWHC 2564 (Pat) (hereinafter referred to as *Optis v Apple*) decision and the recent decision of *InterDigital Technology Corporation & Ors v Lenovo Group Limited & Anor* [2023] EWHC 539 (Pat) (hereinafter referred to as *InterDigital v Lenovo*) addressed the factoring in of third party IP costs by SEP Users, observing the application of the ETSI IPR Policy to each case and the guidance provided for establishing a financial contingency (see paragraph 199 of the judgment, and reference to Section 4.5 of the ETSI Guide on Intellectual Property Rights (ETSI Guide on IPRs). See the latest version at:
https://portal.etsi.org/directives/47_directives_june_2023.pdf from pages 63 - 80 [09.07.2023]).
Section 4.5 of the ETSI Guide on IPRs states: *Members developing products based on standards where there may be Essential IPRs, but there is uncertainty, have mechanisms available which they can use to minimize their risk. As a non-exclusive example, a member might wish to put in place financial contingency, based on their assessment of "reasonable", against the possibility that further/additional license fees might become payable.*
The Court in *InterDigital v Lenovo* also held that, 'A willing licensee would set aside, whether notionally or otherwise, funds to pay for the licences needed to implement a particular standard, even where the precise amounts required may well be uncertain': see paragraphs 203 and 521 of the judgment.
That regulators are also of this view regarding the setting up of an IP budget is also evidenced by the fact that the European Commission DG Comp drafted Section 4.5 of the ETSI Guide on Intellectual Property Rights.
Indeed, the sound business practice of many manufacturers is to 'routinely build potential licensing costs into their process anyway': Stephen Lawson and IDG News Service, 'Patent threat to 802.11n may be overblown' in Macworld; available at https://www.macworld.com/article/187517/80211npatents.html [09.07.2023].

that:

- a patent owner is not required to refrain from initiating court proceedings until licence negotiations are concluded in order to avoid an accusation of disproportionality for seeking injunctive relief;
- the mere fact that a patent owner seeks injunctive relief does not in itself allow an infringer to raise a proportionality defence under §139(1)(3) PatG, given it is an exclusive right of the patent owner to exclude third parties within the framework of patent and antitrust regulations;
- in the absence of other circumstances justifying the disproportionality defence, an infringer cannot raise a proportionality defence if the patent holder is found to have met its FRAND obligations;
- that infringement proceedings relate to standard essential patents that are the subject of a voluntary FRAND commitment and implemented in complex products are not circumstances which of themselves can be relied upon to raise a proportionality defence.

German case law thus appears to demonstrate that the reform of §139 PatG has - so far - not impaired a functioning innovation ecosystem. Rather, the latest amendments to §139 (1) PatG appears to have primarily codified the Federal Court of Justice's "heat exchanger" ruling from 2016.

What comes next?

It is apparent that parts of the industry are dissatisfied with the latest reform and are calling for far-reaching intervention in the current system. They demand that the element of "proportionality" in the §139(1) PatG be interpreted as a *de facto* prohibition on issuing injunctions if the patent is part of a "complex product".

As this article shows, research organisations, small and medium-sized enterprises and individual inventors would be the first to suffer from such a significant restriction on the right to seek injunctive relief under patent law. Indeed, "[f]or SMEs in the EU to keep playing this role in the best circumstances, it is vital that SMEs are supported in the protection of their innovations. Studies show a positive correlation between IPR ownership and economic performance, which is particularly strong for SMEs. This puts protection of intellectual property central to the EU's and the EUIPO's strategies to support SMEs."[30] The Court of Justice of the European Union has also recently affirmed the importance of effective enforcement of IP rights

[30] EUIPO Intellectual Property SME Scoreboard (September 2022) at page 7, available at https://euipo.europa.eu/ohimportal/en/web/observatory/sme-scoreboard.

and their high level of protection,[31] as have courts in other jurisdictions[32] and regulators[33] in cases or statements on the protection of standard essential patents the subject of a voluntary FRAND commitment.

Those who advocate the further restriction of the right to cease and desist assume that the interest of the right holders is sufficiently secured by the regulation on compulsory licences and the claim for damages. However, compulsory licences are only provided for under certain circumstances and for a limited period of time, and damages as a remedy for patent infringement are only a poor substitute for injunctive relief because they (i) delay the earning of revenue for the patent owner; and (ii) place law-abiding licensees at a competitive disadvantage vis-à-vis infringers. In fact, each of these variants would massively limit the economic efficiency inherent in patent licensing. Moreover, one fails to realise that both licensors and potential licensees must adhere to a basic principle of German law, namely the duty to act in good faith pursuant to § 242 of the German Civil Code (BGB). This basic principle is now reinforced in § 139 (1) PatG.

Despite recent case law, it is feared that companies that already advocated for the exclusion of injunctive relief in connection with "complex products", in the context of the discussion about the Patent Law Modernisation, will continue these efforts. This is especially to in the context of the "Internet of Things", where more and more devices are connected, and it is claimed that patents are difficult to identify or that licensing is impossible. Such rhetoric aims to create an illusionary need to amend the Patent Act. Experience shows, however, that licensing practices are adaptable and therefore able to serve even the most sophisticated forms of technology. Complex products in particular require the cooperation of many actors and respect for the individual achievements contained therein. Accordingly, it remains essential that those who use third party intellectual property - especially that which enables interoperability - act in good

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31 *Phoenix Contact GmbH v. Harting Deutschland GmbH & Co. KG* (C-44/21) 28 April 2022 CJEU.

32 *Unwired Planet International Ltd v Huawei Technologies (UK) Ltd & Anor* [2020] UKSC 37 (hereinafter referred to as *Unwired Planet v Huawei*), where the Court stated that it does not 'construe the [ETSI] IPR Policy as prohibiting the SEP owner from seeking in appropriate circumstances an injunction from a national court where it establishes that an implementer is infringing its patent. […] The possibility of the grant of an injunction by a national court is a necessary component of the balance which the IPR Policy seeks to strike, in that it is this which ensures that an implementer has a strong incentive to negotiate and accept FRAND terms for use of the owner's SEP portfolio. The possibility of obtaining such relief if FRAND terms are not accepted and honoured by the implementer is not excluded either expressly or by necessary implication. The IPR Policy imposes a limitation on a SEP owner's ability to seek an injunction, but that limitation is the irrevocable undertaking to offer a licence of the relevant technology on FRAND terms, which if accepted and honoured by the implementer would exclude an injunction' (at paragraph 61). The court further held that the 'threat of an injunction cannot be employed by [SEP owners who provide a FRAND licensing commitment] as a means of charging exorbitant fees, or for undue leverage in negotiations, since they cannot enforce their rights unless they have offered to license their patents on terms which the court is satisfied are fair, reasonable and non-discriminatory. [… A]n award of damages is unlikely to be an adequate substitute for what would be lost by the withholding of an injunction. […] In the case of such an order, the infringer may have little option, if it wishes to remain in the market, but to accept the FRAND licence […]. However […] that does not mean that the court is enabling the patent-holder to abuse its rights' (at paragraphs 164, 166, 167). Affirmed in *Optis v Apple* and *InterDigital v Lenovo*.

33 https://www.justice.gov/opa/speech/antitrust-division-economics-director-enforcement-jeffrey-wilder-iam-and-gcr-connect-sep. See also *Unwired Planet v Huawei*, at paragraph 164, where the Court held that the 'threat of an injunction cannot be employed by [SEP owners who provide a FRAND licensing commitment] as a means of charging exorbitant fees, or for undue leverage in negotiations, since they cannot enforce their rights unless they have offered to license their patents on terms which the court is satisfied are fair, reasonable and non-discriminatory'.

faith in the marketplace, respect intellectual property, and conduct due diligence on their own products for possible infringement before launch.

Nothing seems to outweigh the many benefits of a strong patent system for all stakeholders in the German innovation ecosystem. Intellectual property, especially German patents, is a central building block for achieving the goals of the German government. In fact, the strength of German SMEs often lies in their specialisation in one technology, which is frequently used in a product alongside many other technologies.

If one relies on maintaining a globally competitive and sustainable innovation ecosystem to support the German HTS 2025, any proposal to weaken the patent system is hardly comprehensible. Weakening the patent system would mean prioritising quick profits - whether for local or foreign manufacturers producing or importing goods into Germany. Conversely, it is sustainable, long-term growth of the economy and businesses which reflects the nature of the German SMEs and start-ups - and thus the German economy.