Germany focus

An *IAM* management report

Welcome

By any standards, Germany is an important market. It is Europe's largest economy, the third largest in the world and the fifth largest by purchasing power parity. It is also the home to any number of innovative companies working across a range of industrial sectors; while its 80 million largely affluent citizens make the country the biggest in the European Union in terms of population.

From a specifically IP perspective, the Germans file more patent and trademark applications than any other people in Europe, while the German courts hear over half of all patent litigation cases filed in the continent.

As a result, therefore, when *IAM* decided that it was time to launch a new series of country-specific reports, Germany was the logical place to begin.

Moving forward, our aim is to provide readers with a guide to some of the major issues affecting IP exploitation in many of the world's most important jurisdictions. By focusing on the work being done at forward-thinking companies in a specific country and by talking with leading practitioners on the ground, we will be providing a valuable snapshot through which readers can gain a more detailed understanding of the environment within which IP rights can be created, exploited and, should it come to it, enforced.

In the case of this special German focus, we have Martin Bader, a former vice president and chief intellectual property counsel at Siemens spin-out Infineon Technologies, providing a general overview of the current lie of the land in IP; while three top lawyers from private practice – Bernd Allekotte of Grünecker, Kinkeldey, Stockmair & Schwanhäusser, Benjamin F Grzimek of Taylor Wessing and Wolfgang Leip of Mayer, Brown, Rowe & Maw – get deeper into detail in a roundtable discussion. Finally, *IAM* staff writer Liz Rutherford-Johnson takes a look at the work being done by MorphoSys and Ascenion, two biotech businesses, and Webasto, a perennial of the auto industry, and examines how they have all put IP at the heart of their strategies.

We are grateful to all those who have helped us put together this Germany focus and look forward to bringing readers a new country survey in the early part of 2007.

Joff Wild,
Editor, *IAM*

Chapters

Germany's IP challenge

Although German companies have a strong innovative tradition, they must use intellectual property creatively if they are to be successful in meeting the economic challenges of the 21st century

By **Martin A Bader**

Germany has long recognised that one of its most important resources is creativity. The country has a well-established tradition of invention and protection through industrial property rights: the first uniform German patent law took effect in 1877. Today, Germany is the world's largest exporter, with exports totalling approximately US$970 billion and a trade surplus of about US$190 billion (2005). Major exports include motor vehicles, machinery, chemical and metal products, and devices for electricity production and distribution.

Germany ranks among the top nations for invention. Economic investment in research and development (R&D) has climbed to 2.5% of gross domestic product (GDP), placing the country in the upper third of industrialised nations. To meet the challenges of globalisation and facilitate the transition to a knowledge-based society, the German government has launched a high-tech policy to increase opportunities in sectors such as aerospace, energy, transport, and information and communication technologies.

Almost 71,000 trademark applications were filed in 2005, an increase of about 7% on the previous year. Patent filings, too, remain consistently high, with more than 60,000 national patent applications submitted in 2005. More than half of all patent applications come from the southern federal states of Baden-Wurttemberg and Bavaria, which respectively generate 120 and 110 patent applications per 100,000 inhabitants. The federal average is 59 registrations per 100,000 inhabitants, although this figure is significantly lower in the eastern states.

Small and medium enterprises (SMEs) account for around 20% of domestic patent applications. Just 0.3% of applicants submit over 100 patent applications a year – mainly large corporations and world market-leading SMEs. Most commonly, foreign applicants for German patents come from the United States (22%), Japan (15%), France (5%), the Netherlands (5%), Switzerland (4%) and the United Kingdom (3%). At the European level, Germany is recognised as the most important market in which to seek protection of inventions: 98.2% of all filings with the European Patent Office (EPO) select Germany as a designation state.

Germany values its inventors

Germany's spirit of innovation is reflected in its Law on Employee Inventions, which requires employer-patent owners to pay special compensation to employee-inventors for exploitation of employee inventions enjoying patent or utility model protection. Companies employing staff under German law must calculate the benefits of patent protection at regular intervals. Unfortunately, this places a heavy administrative burden on companies: it is estimated that for every euro paid in remuneration to inventors, an extra euro must be spent on administrative costs to calculate the amount. Moreover, it takes a relatively long time after submission of an invention before the first remuneration payments are received. Some companies have thus found a way to optimise the ratio between incentive value for inventors and administrative costs: leading semiconductor company Infineon Technologies, for example, offers direct, immediate lump-sum payments

to employee-inventors if they release the company from taking certain administrative steps of little value to them. Moreover, despite the administrative expense, a key advantage of the existing process is that the data generated can be used internally as a preliminary estimate in licensing negotiations.

An amendment to Section 42 of the Law on Employee Inventions, effective since 7th February 2002, has changed the landscape for universities and public research organisations. The new legislation assigns the inventions of university staff to the university authorities. As a result, most German universities have now founded their own technology transfer centres. However, as this is only a recent development, the universities have not yet caught up with well-established public research organisations such as Helmholtz-Gemeinschaft, Fraunhofer-Gesellschaft or Max-Planck-Gesellschaft.

The nationwide INSTI network has also existed since 1995, bringing together 35 local partner organisations that aim to increase the use of patent information and create an inventor and innovator-friendly climate. The network, which is supported by the Federal Ministry of Economics and Technology, offers support to inventors and SMEs regarding the development of ideas and the commercial exploitation of inventions.

Top 20 patent applicants in Germany (2005)

Rank	Company	Domicile	Applications*
1	Siemens AG	DE	2,398
2	Robert Bosch GmbH	DE	2,149
3	DaimlerChrysler AG	DE	1,899
4	Infineon Technologies AG	DE	1,448
5	Volkswagen AG	DE	859
6	BASF AG	DE	631
7	Denso Corp	JP	625
8	Bayerische Motoren Werke AG	DE	569
9	ZF Friedrichshafen AG	DE	511
10	Fraunhofer-Gesellschaft eV	DE	384
11	Audi AG	DE	354
12	BSH Bosch und Siemens Hausgeräte GmbH	DE	348
13	Voith Paper Patent GmbH	DE	325
14	General Motors Corp	US	292
15	Adam Opel AG	DE	271
16	Behr GmbH& Co KG	DE	233
17	Hewlett-Packard Development Co LP	US	225
18	Henkel KGaA	DE	215
19	Samsung Electronics Co Ltd	KR	208
20	INA-Schaeffler KG	DE	207

Source: *GPTO (2006)*

** Published patent applications with effect in the Federal Republic of Germany 2005*

The commercialisation era

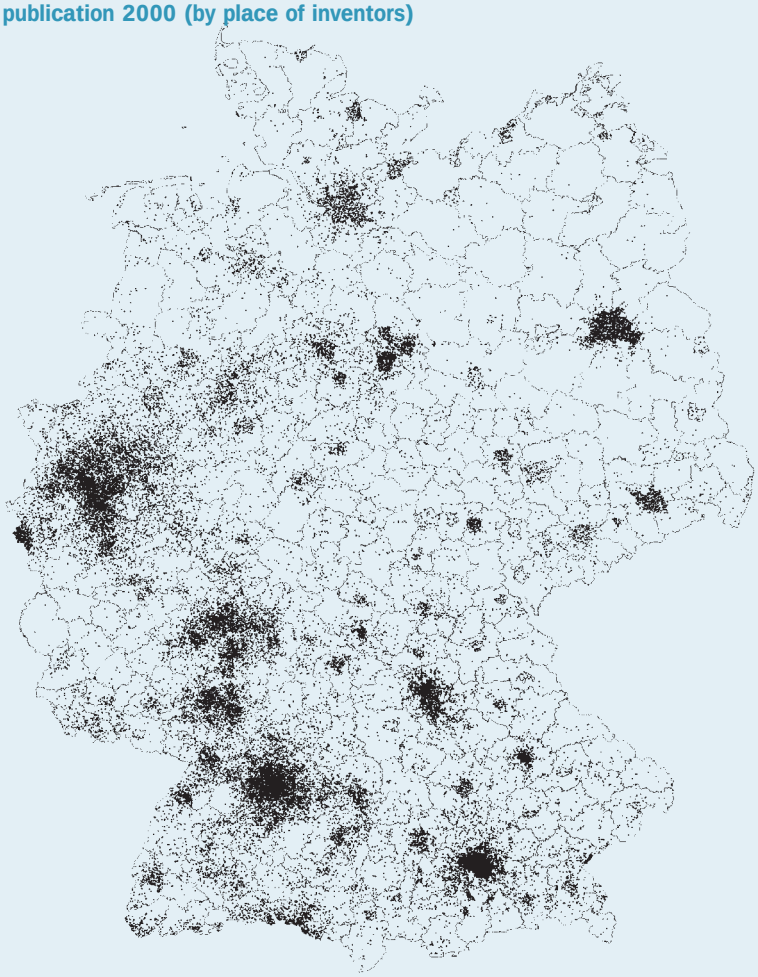
One significant trend which is having a major influence on the commercialisation of intellectual property is the shift towards an open innovation model. Whereas in the past attempts were made wherever possible to keep all innovation-related activities in-house, an opening up of innovation processes can now be observed. Increasingly fast innovation cycles and more complex technologies mean that few companies can now provide the innovative strength that is needed in-house. In response to the ever-increasing pressure to innovate, more and more companies are opening up their innovation processes and forging ties with external partners to create successful new products and services. This cultural change also explains why worldwide royalty and licensing fee volumes have increased dramatically over the last decade to US$100 billion.

A good example of this shift to an open innovation culture is chemical company Bayer MaterialScience, which has defined a full lifecycle for intellectual property consisting of three categories: knowledge acquisition, protection and exploitation. Knowledge acquisition takes place either internally through self-generation of knowledge or externally through research on demand, collaborations and joint ventures, or the in-licensing or purchase of knowledge and intellectual property. Knowledge exploitation takes place either through internal use or externally through collaborations and joint ventures, or the out-licensing or sale of knowledge and intellectual property.

As a consequence of such developments, intellectual property in Germany is no longer solely used as a defensive tool or for reasons of prestige, but increasingly as a means to obtain access to third-party intellectual property, to minimise the risk of substitutive technologies and to win extra income through royalties.

In the late 1990s, car manufacturer DaimlerChrysler agreed to sign a limited cross-licence agreement with competitor Toyota based on one of DaimlerChrysler's core patents covering its new brake assistance system. In return, Toyota paid royalties in various countries, including Germany, the United States and even Japan. DaimlerChrysler has adopted a holistic patent management philosophy comprised of nine central pillars,

Regional distribution of patent applications in Germany by year of publication 2000 (by place of inventors)



Source: *Siegfried Greif und Dieter Schmiedl, Patentatlas Deutschland – Ausgabe 2002, München 2002. The picture is reproduced with kind permission of the German Patent and Trademark Office*

one of which seeks to check the transferability and exploitability of development results, and another of which focuses on the enforceability of the company's intellectual property with respect to third parties.

Meanwhile, sports car manufacturer Porsche is known for swiftly acquiring or in-licensing external intellectual property that might conflict with its core technologies. Porsche even buys or in-licenses potentially substitutive technologies that could erode or endanger its own technologies. World-renowned German component suppliers to the automotive industry, such as Bosch, Continental, Mann+Hummel, Siemens VDO and ZF Friedrichshafen, have also developed strong patent positions to boost their bargaining power in negotiations with global car manufacturers.

Some sectors – such as the electronics, semiconductor, telecommunication and software industries – are burdened with a high level of reciprocal dependence. Germany's major players in these fields have been wise enough not to start litigating their patent portfolios, but instead seek to develop opportunities and new markets.

In the past, global electronics giant Siemens mainly used its patents for defensive actions and to contract large patent cross-licence agreements. Today, the enterprise has a sophisticated licensing group that detects infringers and develops and evaluates out-licensing deals on a global scale. Siemens settled a patent cross-licence agreement with Microsoft in 2004. Although Microsoft has a similar R&D budget, Siemens managed to obtain

additional royalty payments from Microsoft as the basis for a balanced agreement.

Formerly state-owned companies such as Deutsche Telekom and Deutsche Post World Net have also had to shift from state monopoly protectionism to liberalised markets. Although in the past, intellectual property rights such as patents played only a minor role, both companies have now developed reasonable patent portfolios to support their global strategies. Deutsche Post World Net is the world's fourth largest logistics service provider. Its main competitors are UPS, Federal Express and Royal Mail. Deutsche Telekom has experienced new exploitation opportunities through privatisation and globalisation of its activities since 2002, and has now begun to market its intellectual property – a trend that is expected to develop across the sector in the near future.

Focused litigation

It is common knowledge that as yet there is no central European patent litigation court. However, the German courts have a sterling reputation both in Europe and in the international patent enforcement landscape. Renowned courts with chambers specialised in patent infringement are situated in Düsseldorf, Munich, Mannheim and Braunschweig. These courts are known not only for their technical competence, but also for comparatively fast proceedings and high-quality decisions.

European and international companies are increasingly opting to run major trials in Germany and then negotiate out-of-court settlements for other world markets. As an example, in its leading trial on memory technology US-based development company Rambus sued South Korean memory semiconductor giant Hyundai and Micron, America's largest D-RAM memory manufacturer, before the Mannheim Regional Court.

R&D collaborations

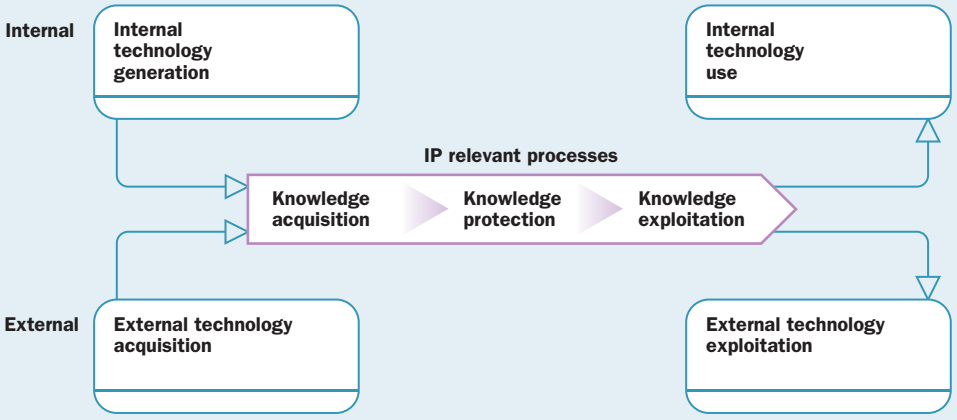
Today, German companies view managing innovation as one of their main challenges. Only those companies that can bring innovative ideas effectively and efficiently to market will succeed. Consequently, an increasing proportion of innovation no longer takes place within the confines of the company. The relevance of R&D collaborations has thus increased.

One German company which has embraced the potential of R&D collaboration is consumer goods manufacturer Henkel. Indeed, Henkel no longer insists on obtaining all intellectual property rights deriving from the collaboration: the collaboration partner may keep intellectual property resulting from its work, and Henkel might even support the partner with its own know-how. The advantage for Henkel is that it has become very attractive to suppliers and other potential partners. In return, Henkel receives, for example, an exclusive purchase agreement for a specific period of time.

Service innovations

Especially for German companies, sustainable competitive advantage can often be maintained only with the support of service innovations that promote customer loyalty. The ability to expand legal protection strategies into the field of service innovations is gaining strategic importance –

Intellectual property exploitation lifecycle at Bayer MaterialScience



Source: *Gassmann and Bader (2006)*

and not only for companies in the service industry sector. Increasingly, legally protected service innovations will reduce imitation and second-mover advantages. Further, legal protection strategies afford the potential for service-oriented enterprises to open up new markets.

Although over half of German GDP stems from general and financial services (51.4%), the protection of service innovations is still a relatively new phenomenon. As an example, in the financial services industry, US companies seem to be much more aggressive in obtaining patent protection in Europe than their German counterparts such as Deutsche Bank, Allianz and Munich Re. Anglo-American and Japanese entities, in particular, are good examples of trailblazers that have incorporated intellectual property rights into their business activities. In the banking and (re)insurance industries, 75% of patent applications and granted patents before the EPO originate from companies in countries such as the United States, Canada and Great Britain.

Outlook

German economic performance is characterised by strong exports, reflecting many years of external competitiveness. However, current strengths are rooted in Germany's industrial traditions. Faced with growing global competition and the shift towards a services society, successful German companies must adapt to meet the challenges of today's knowledge-based economy. An open innovation approach is important in a world where commercialisation skills are necessary to maximise the value of one's intellectual assets and create smart new market opportunities.

However, leadership in innovation does not automatically imply leadership in commercialisation. For Germany and German companies, a further cultural shift may be required to get ahead in protecting and exploiting within the new business segments. As the example of the financial services industry bears out, US and Japanese institutions are advancing faster than their German counterparts in this regard, even though the general services and financial services segments already account for more than 50% of German GDP.

German companies must keep rethinking and revising their business models, and with them their IP portfolios and commercialisation strategies, to stay ahead in today's competitive, globalised world. It is anticipated that the national spirit of innovation will inspire German companies to become leaders in the new value creation era.

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