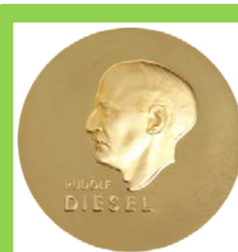
Industry Case Study Series on IP-Management

CLAAS
Digital Revolution in Agriculture

By Alexander J. Wurzer, Thomas Böck & Steffen Budach

MIPLM Industry Case Study Series Nr.: ICSS2015-01-320
CEIPI, University Strasbourg in cooperation with
Steinbeis Transfer Institute for Intellectual Property Management
Steinbeis + Akademie, Thalkirchner Str. 2, 80337 Munich

MASCHINE DES JAHRES 2016



Dieselmedaille 2017
Erfolgreichste Innovationsleistung

Center for International Intellectual Property Studies | CEIPI
University of Strasbourg

CEIPI MASTER OF IP LAW AND MANAGEMENT

AUTHORS

Prof. Dr. Alexander J. Wurzer

Dr. Wurzer is Adjunct Professor for IP Management at the Center for International Intellectual Property Studies (Centre d'Etudes Internationales de la Propriété Industrielle, CEIPI) at the University of Strasbourg, where he has been Director of Studies for the Master's degree in Intellectual Property Law and Management (MIPLM) since 2007. Prof. Dr. Wurzer is Director of the Steinbeis Transfer Institute for Intellectual Property Management at Steinbeis University Berlin. He is Managing Partner at WURZER & KOLLEGEN GmbH, a consulting firm specializing in strategic IP management.

Prof. Dr. Wurzer is Chairman of DIN committees DIN 77006 for quality in IP management and DIN 77100 for patent valuation. He is a member of the Board of Directors of "Deutsches Institut für Erfindungswesen e.V." (DIE), Spokesman of the Board of Trustees awarding the Diesel Medal and Fellow at the Alta Scuola Politecnica at Milan/Turin Polytechnic. He is also a jury member for the 2018 German Innovation Award of the German Design Council and a member of the group of experts of the European Commission.

Thomas Böck, Managing Director Technology and Systems

Thomas Böck, born in 1971, has an engineering degree from a university of applied sciences with a specialization in general electrical engineering. His postgraduate career began as a developer of electronic/electrical and electronic/hydraulic vehicle systems. Within the scope of his roles with renowned manufacturers of agricultural machinery and commercial vehicles between 1996 and 06/2006, he was responsible for developing and testing electronic and hydraulic vehicle systems and commercial vehicles. Thomas Böck joined the CLAAS Group in 2006. As Head of System Technology, he was responsible for electronics development incl. pre-development, engines, hydraulics, mechanical drive technologies, and cabs for harvesters, self-propelled shredders, and systems vehicles. From 2011 to 2012, Thomas Böck was Head of Technology for R&D, Production and Logistics at CLAAS Saulgau GmbH. In October 2012, he was appointed Managing Director Technology of CLAAS Saulgau GmbH.

Dr. Steffen Budach, Head of the IP Department at CLAAS Group

Steffen Budach, born in 1963, has an engineering degree with a specialization in general mechanical engineering. His postgraduate career began as Patent Consultant at CLAAS Saulgau GmbH. In 2001, he became responsible for the entire IP function at CLAAS Group. Dr. Steffen Budach is a German and European Patent Attorney.

About CLAAS

CLAAS is manufacturer of agricultural machinery with worldwide operations and headquarters in the East Westphalian town of Harsewinkel near Gütersloh. Throughout its history, which dates all the way back to 1913, CLAAS has repeatedly introduced groundbreaking innovations to the international agricultural community, which have turned into long-lived product types with a dominant design. CLAAS stands for efficient agriculture around the globe, including Africa, where the company has been active for several decades. Hundreds of tractors and combine harvesters can be found across Sudan, for instance. Durability and robustness are more important to Sudanese customers than high-tech – but CLAAS offers both. The Dominator combine harvester – the epitome of a solid harvester in the eyes of African farmers – was introduced in the 1970s. This association is so strong that "Dominator" has even become synonymous with combine harvesters in some African languages.

Innovation has been in the DNA of the company founded by entrepreneur and machine fitter August Claas since its inception. On the eve of the beginning of World War I, Class made the bold move of starting his own business producing and repairing mechanical hay balers. Even his father had already been intrigued by this type of machine adopted from the UK and developed it further. Continuous development led to the first patent for a knotter with a movable upper lip in 1923. Straw binders and straw balers are the main drivers for the company's growth. Today's balers produce round or square hay bales weighing up to 400 kg/piece as well as

silage bales weighing more than one tonne each. Before the bale is placed on the field, it is bound and wrapped with six layers of stretch film in a single step once it has been pressed. This process takes just 35 seconds.

Another milestone was the development of a combine harvester adapted to European harvest conditions. The product was launched in 1936. CLAAS had introduced its first fully functional European combine harvester to an awestruck public. After the war, CLAAS became an international combine harvester expert. The 100,000th combine harvester, a CLAAS MATADOR, was presented in 1962. But in this year alone, CLAAS manufactured 20,000 harvesters, making the company the leading manufacturer in Europe. The largest combine harvester model currently on the market has a maximum output of nearly 600 hp and reaches a top speed of 40 km/h. The cutterbars are up to 13.5 m wide. The grain tank holds 12,500 litres. With this harvester, 675 tonnes of wheat can be harvested across a surface of approximately 70 hectares in eight hours.

CLAAS is also adaptive to developments in the agricultural sector. In 1973, the company responded to the increasing trend of corn cultivation with a self-propelled harvester for the crop, the Jaguar forage harvester, and quickly became the global market leader in this segment.

To round off its product range, CLAAS decided to launch its own high-horsepower tractor, the XERION, in 1997. But modern tractors are more than just traction engines: they are agricultural system vehicles. In 2003, CLAAS acquired 51% of the shares of French tractor manufacturer Renault Agriculture, which enabled the company to offer a complete range of tractors.

Since 1994, CLAAS has been promoting digitization in agriculture, initially with the electronic, satellite-based AGROCOM information system. The development and integration of software and systems is now bundled in the E-Systems department at CLAAS. In order to optimize the efficiency and sustainability of the complex process chains in the agricultural sector, the installed services of the available equipment must be retrievable in a targeted manner and logistics functions must be available without delay. The tasks of controlling, measuring, documenting and managing require networked systems and integrated processes.

In the past, the classic response to the quest for high yields were larger machines. But the natural environment provides limits for 21st century agricultural engineering and agriculture. There is hardly any scope for today's machines to grow further in terms of size, width and height. It is therefore becoming increasingly important to introduce production-related know-how into the process chains in such a way that efficiency can be increased further. Software and sensors already account for 30 percent of the value added in agricultural engineering. In the automotive industry, this proportion is still much lower at an average of 10 percent. Agriculture is one of the most digitized industries.

The challenge: digitization and precision farming

Agricultural engineering is one of the world's most important future industries. Without state-of-the-art technology, today's agricultural sector would be able to feed no more than 1.5 billion people using the arable land available. 7.3 billion people, about 83 million more than last year, currently live on Earth. Most forecasts predict that, by 2050, the planet will be inhabited approximately 9 billion people. The implications for food production are significant. Across about 52 million km² of land, we currently harvest some 2 billion tonnes of cereals and produce approximately 320 million tonnes of meat. By 2050, our demand is expected to increase to over 3 billion tonnes of cereals and 470 tonnes of meat. At the same time, however, the agricultural space available will decrease to 50 million km².

One of the main answers to this challenge is "smart farming". But the consistent use of digital intelligence in agriculture does not only pay off in terms of yield. It also improves the quality and sustainability of our foodstuffs. The digital optimization of process chains helps to reduce the use of fertilizer on the fields, the output quantity of pesticides and the use of medicines in livestock breeding. As a result of these effects, smart farming is not just a megatrend in conventional agriculture but also in organic farming as it reduces the cost of production.

If, for example, the combine harvester measures the amount of grain harvested per square metre every two seconds, these data allow direct conclusions on the topology of the field. The yield map created in this way indicates the exact distribution of fertile soil. Such data can be used for a more targeted application of seeds and fertilizers, thus avoiding over and underdosing. Soil cultivation can be performed in accordance with the exact nutrient content and yield along different field topologies instead. The current crop status can be determined via satellite images, which can be combined with weather data to issue advance warnings of pest infestation, including on smartphones or tablets. This permits savings of up to 95% of pesticides used.

Fully automated GPS-supported steering systems, e.g. in the case of tractors, ensure optimized towing vehicle operation. Turns on headlands are performed automatically in such a way that they permit a highly precise next run. The accurate tracking performance due to the GPS system leads to savings on diesel, machine hours, working time and operating materials of up to five percent.

Telematics solutions enable a much more efficient harvesting process. If the combine harvester is networked with the other agricultural machines being used, it can call the tractor, taking into account travel time and harvesting speed, to arrive just in time when the grain tank is full, i.e. about every 10 minutes in ideal conditions. The precise rendezvous point must therefore be determined in advance to avoid idle times and inefficient duplication.

The agricultural sector has practically become a showcase for Industry 4.0 and the Internet of Things. By integrating sensor technology, data processing and networking technology, products can be equipped with additional benefits and processes can be optimized across the value chain. Digitization has already gained a firm foothold in the German agricultural industry. One third of farmers with more than 100 hectares use Industry 4.0 solutions, as do one in five smaller farms. According to a study conducted in 2015, the global market for precision farming is growing by about 12 percent every year. Global investment in agricultural technology is estimated at US$ 208 billion for 2018 alone.

Precision farming is the future of the agricultural sector. To stay at the forefront of this trend, CLASS decided to spin-off all electronics-related activities into an independent limited company as part of its growth strategy, followed by the introduction of the full subsidiary 365FarmNet at the agricultural trade fair Agritechnica in Hanover in 2013. 365FarmNet is an information and working platform that links the various operating processes with data and enables efficient farm management. Instead of using 10 to 15 different programs as has previously been the case, the software system integrates all available data in order to make Industry 4.0 as efficient and simple as possible for farmers.

The CLAAS family business has more than 11,500 employees, generated a turnover of more than EUR 3.8 billion in 2015 (up from EUR 2.5 billion in 2010) and holds more than 3,000 patents worldwide. Its export activities account for about 77%. The company posted a 2014 pre-tax profit of nearly EUR 330 million. Throughout its corporate history, CLAAS has repeatedly demonstrated that global breakthroughs can be achieved if the right ideas are combined with perseverance and an appetite for risk. Having already reacted to the industry's dynamic challenges, the company decided to review and adapt its IP management to these situations in 2009.

IP strategy and positioning

CLAAS is a technology leader and often a first mover in introducing new technologies. The fundamental question the company had to ask itself in 2008/09 was how its patent portfolio was positioned compared to its business and technology segments, the competition and technology trends. The aim of this analysis was to optimize resource management and identify opportunities and risks arising from the company's patent position. A successfully reached position of exclusivity should also lead to tangible economic results if designed into the patent portfolio as a forward-looking scenario to optimize its value contribution.

Portfolio analysis is an analytical tool that methodologically supports investment decisions in intellectual property as well as strategic considerations for the use and competitive implementation of prohibition rights. The portfolio methodology was developed in the 1970s and is the most widely used tool for linking business analyses with analyses of the corporate environment (e.g. the competitive situation). Portfolio analysis enables a holistic view of a company's activities and their alignment with corporate goals. Portfolio analysis is often performed in two steps. The first step is to define which critical objects for success are to be analyzed. Such critical objects for success arise from sustainable performance and success potentials for the company's future development. In the case of patent portfolio analysis, these are patent stocks which ultimately lead to positions of exclusivity. The selection of the holdings to be analyzed, their comparability, their significance with respect to the initial questions and the level of detail applied in order to subsequently achieve high-quality evaluation and interpretation results is crucial in this respect.

The portfolio to be analyzed can be structured by using the available applicant information and performing a full comparison with competitive portfolios. But since the underlying purpose is specifically to identify the positioning of spheres of exclusivity along certain technologies, technological classifications made in the patent literature must be matched with specific technological aspects and comparisons must be made at sub-portfolio level.

The term portfolio referring to a set of critical objects for success (portfolio holdings) comes from the French term "portefeuille". A "portefeuille" in the sense of a briefcase is understood as a collection of securities and was first used by H.M. Markowitz in his work on combining various investment options in the context of "securities portfolios" (Markowitz, Portfolio Selection, Journal of Finance 7, 1952, pp. 77 ff.). Strategic portfolio analysis goes beyond simply drawing a map of the current business situation and ongoing activities. It examines the current situation as a starting point for the analysis of future potentials of individual critical objects for success and all critical objects of success identified as a whole. The analyses must therefore include time as a dynamic component along both axes in order to permit meaningful conclusions about the development of the portfolio over time.

Timely domination and consistent commercial implementation of new technologies is seen as a key prerequisite for creating competitive advantages in the dynamic international competitive environment. As the "first-to-file" principle of patent law forces all competitors to secure their desired positions as early on as possible in the innovation process, the patent literature permits conclusions about the technology-related activities of the competition. In addition to providing visibility of the inputs in the form of R&D investments leading to patent applications, the patent literature can also be analyzed from the perspective of potential prohibitive positions which may arise from competitive patent applications in the future (e.g. in terms of blockades prohibiting certain technological solutions).

The patent portfolio analysis presented in the figure below is based on the 2009 technology map for "Farm Management" and the main competitors in this area. This portfolio analysis examines the dynamics of portfolio development within a certain technological field. The proportion of the portfolio related to this technological field as a function of the overall portfolio of the company under examination is plotted along the y-axis. The y-axis therefore represents the contribution of this field to the overall R&D expenditure. Since this is a cumulative analysis of the total active portfolio, it also reflects the relative development of R&D expenditure as at the analysis date. The average age of the subportfolio associated with the technology is shown in relation to the average age of the overall portfolio being analyzed along the x-axis. This analysis provides insights into the dynamics of portfolio development.

While the y-axis provides a summary view of R&D outcomes across the observation period, the y-axis shows the dynamics of these R&D activities. From a strategic perspective, this overview can be interpreted in several ways. The infringement risk in a technological field is disproportionately high, for example, if the competition holds extensive legacy portfolios and a company holds very few patents of its own in the respective technological field. The older a portfolio and the more concentrated the age distribution within the portfolio, the clearer the evidence that a company no longer focuses on that technology in its development efforts. Conversely, the risk of blockage by third parties is particularly high when competitors have filed a large number of young patents within an attractive technological field. From a market and supply perspective, such a portfolio determines the exclusive market positions of the future.

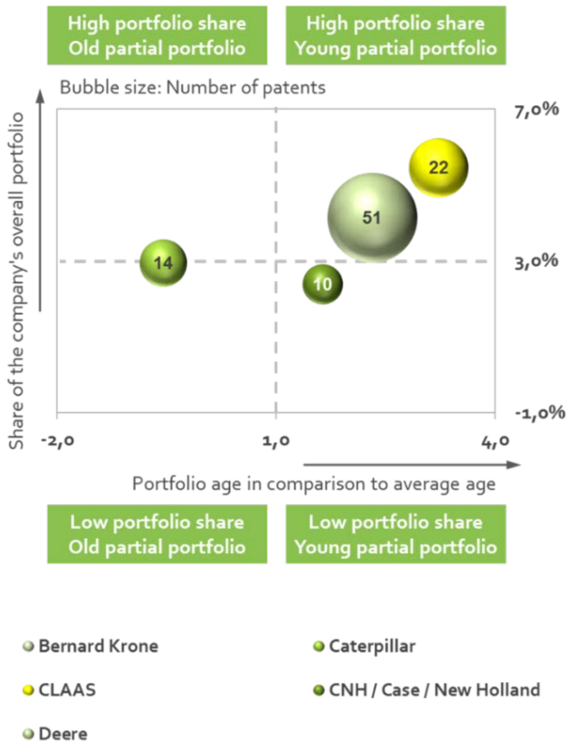


Fig. 1: Portfolio analysis Farm Management.

CLAAS appears to be a technology leader in terms of traditional products and product segments despite the fact that there are much larger competitors in the market and that a number of smaller companies are battling for market shares. Overall, Farm Management is a dynamic environment and the number of applications related to agricultural machinery worldwide is on the increase.

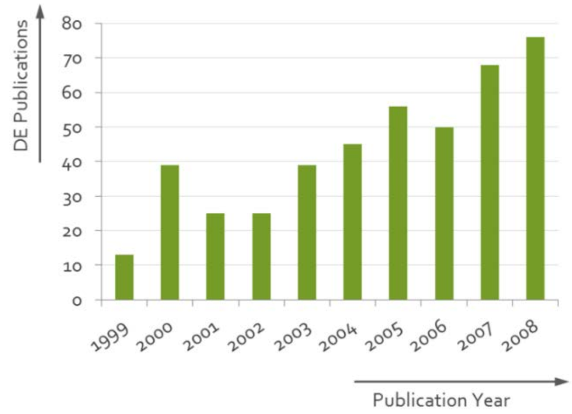


Fig. 2: Development of CLAAS patent applications throughout the observation period.

Throughout the observation period, CLAAS has heavily invested in R&D and IP. The number of annual patent registrations has almost quintupled during this period. Significant differences between competitors can be detected in terms of resource distribution in R&D and therefore in terms of patent application behaviour. Figure 3 shows the patent applicants in descending order of application intensity along the x-axis; Deere has therefore the highest relative application intensity. Put simply, the following assumption can be deduced from the diagram: the greater the application intensity, the weaker the focus on agricultural technology.

The relevance of other technological fields beyond agricultural engineering appears to be greater for larger companies.

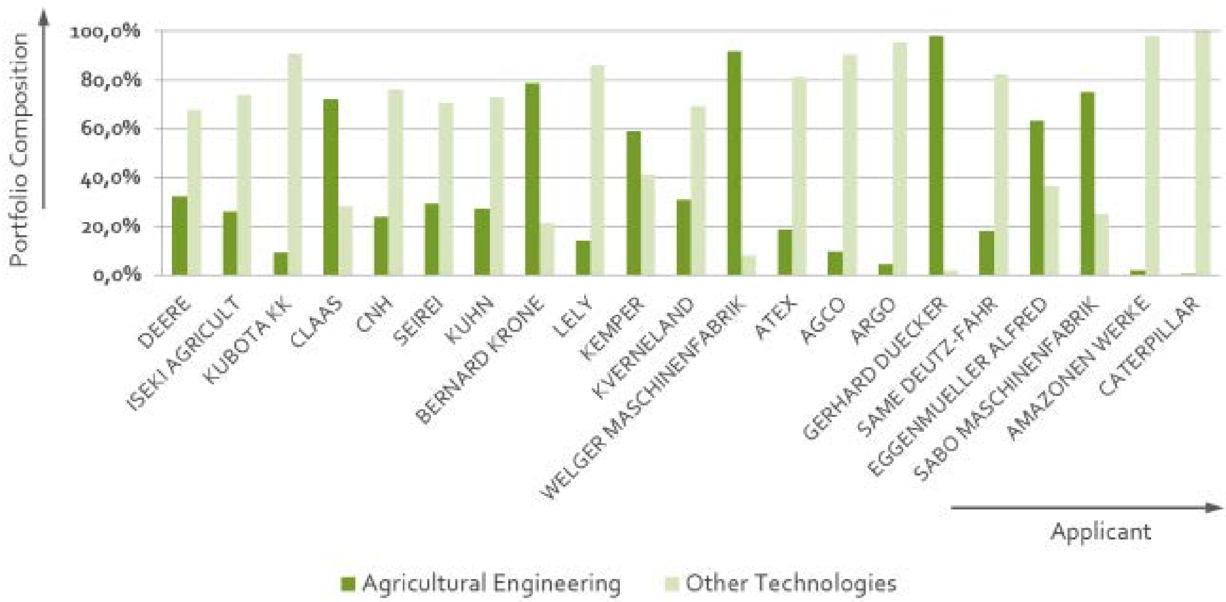


Fig. 3: Competitive analysis of portfolio components

Technology trends clearly show that large agricultural machinery manufacturers diversify their technologies to keep up with the changing demands of the market. The focus is no longer merely on the size of the machines but on more intelligent solutions. This requires increasing integration of electronics, software, telecommunications and networks. The outstanding positioning of CLAAS in the Farm Management segment (Fig. 1) is particularly noteworthy in this respect.

In Farm Management, CLAAS showcases its alignment with its USPs: quality, service and a profound understanding of customer needs. Technology plays a subordinate role in this respect. In the company's understanding, customers – from large agribusinesses to agricultural contractors and individual farmers – primarily purchase customer benefits and only have a subordinate interest in how these benefits are implemented from a technological point of view. The less tangible selling propositions in Farm Management become, the less existing customers are interested in the technical details of the solution. Using concrete customer benefits as selling points and protecting them against the competition by means of IP is therefore becoming more and more important.

The company added strategic prohibition to its IP approach. In addition to avoiding infringement of third-party patent positions and suppressing imitation of proprietary developments, strategic prohibition is primarily aligned with marketing and product management and the required exclusivities in terms of customer benefits. With this patent strategic approach, prohibition rights are no longer a direct result of a company's R&D outcomes but are rather derived from the company's business model and the corresponding objectives (see Fig. 4).

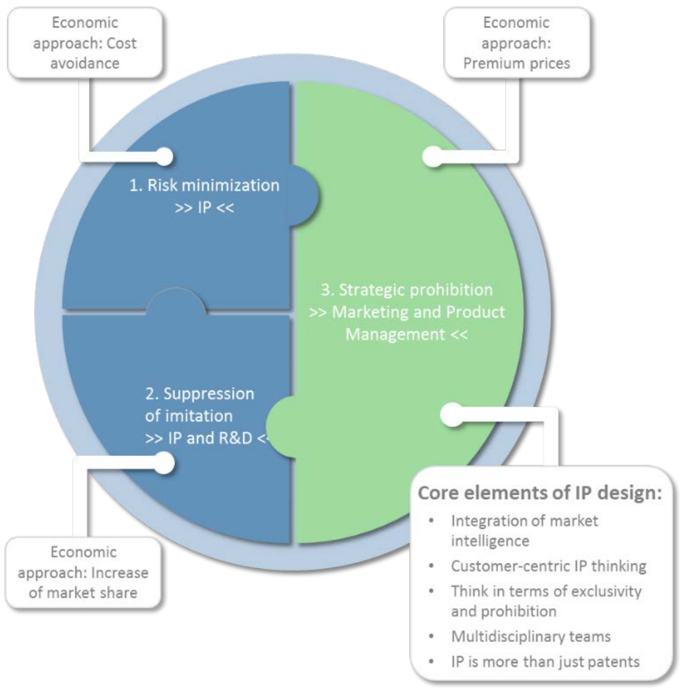


Fig. 4: Competitive analysis of portfolio components.

The analysis also indicates special opportunities for CLAAS in the field of Farm Management from providing a largely standardized cross-system platform which enables the company to supply data from different sources in order to provide an integrated solution.

An analysis performed in 2016 shows that Claas implemented this approach consequently and invested strongly in the application of target aimed patent protection.

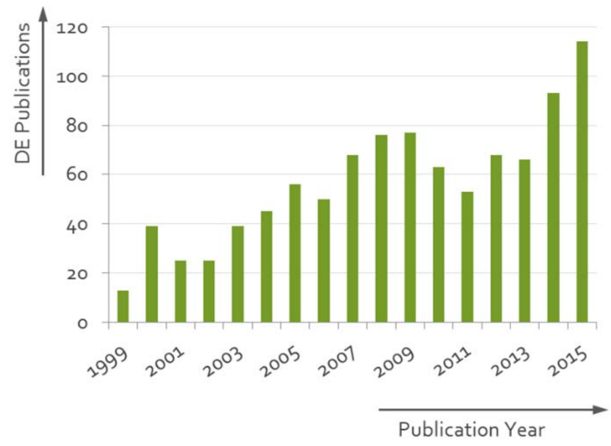


Fig. 5: Development of CLAAS patent applications 2016.

The result of these activities is that Claas was not only able to keep its position in an highly competitive IP environment but to strengthen it.

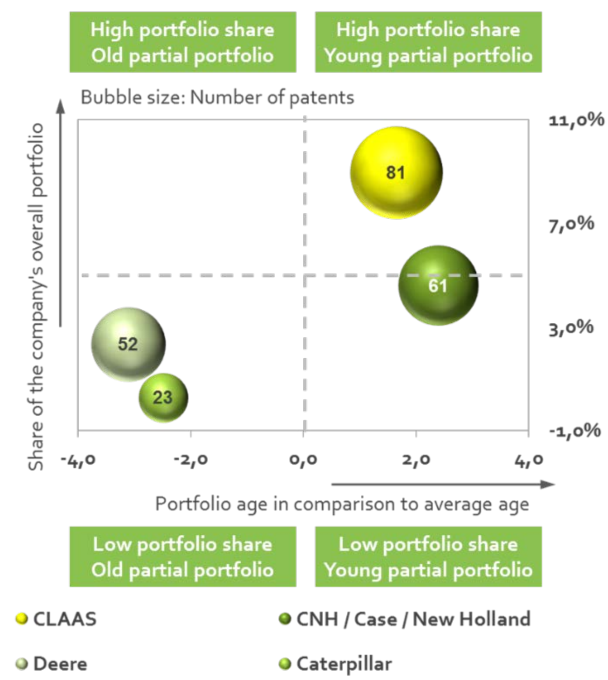


Fig. 6: Portfolio analysis Farm Management 2016.

Summary and benefits for CLAAS

Agricultural machinery is undergoing a dramatic change. Digitization is beginning to revolutionize this industry. In addition to new machine features and performance enhancements, it enables new products, services and business models. CLAAS, a mechanical engineering company characterised by organic growth, a firm foothold in the market and worldwide operations, has responded to these external dynamics in a sustainable, forward-looking and strategic fashion. In addition to developing its own expertise in the field of electronics and subsequently in software and telematics, CLAAS has also risen to the challenges related to software integration and data platforms. The company has gradually adapted its patent strategy and organization to the new realities. The patent strategy was extended beyond the reactive approach of protecting proprietary R&D outcomes to also include the active generation of positions of exclusivity in line with the business model. The company's visible success between 2009 and 2015 proves that CLASS did the right thing by realigning its IP strategy.

Contact
Alexander Wurzer
Alexander.Wurzer@ceipi.edu

What is the MIPLM?

The 21st century marks a new era as our economies increasingly rely on knowledge-based production processes and services. Consequently, the institutions responsible for education and research in the field of intellectual property law in Europe must provide appropriate training for staff from the respective professional environments to acquire or reinforce their ability to initiate, control, protect, exploit and increase the value of intangible assets. The knowledge-based economy integrates research and development activities, innovation, industrialization and the marketing of products and services including intangible assets and completely revolutionizes enterprise management. It creates new professions specialized in dealing with intangible assets: this branch of law attracts consultants and intellectual property experts from among managers, jurists and lawyers. Indeed, every innovation process generated by new economic activities assumes the intervention of the law, the installation of tools and structures for developing or planning in order to control the intangible assets and to optimize their valorization. It has therefore been the duty of CEIPI, University of Strasbourg, as a leading center for Intellectual Property Studies in Europe, to propose a master program on "IP Law and Management" (MIPLM) since 2005, which complements the existing training course for engineers, scientists and lawyers. This "European" master program features a continuous training scheme aimed at experts in the field of intellectual property. It provides a genuine education program based on an investigation carried out in large enterprises in Europe. The teaching staff comprises academics and experts from various countries, renowned for their work and competence in dealing with the impact of intellectual property on the policy of enterprises.

M. Yann Basire
Director General of CEIPI.

Intellectual property has become a crucial factor and driving force in the knowledge-based economy. The economic development and the competitiveness of companies increasingly depend on the generation and exploitation of knowledge. Intellectual property can convert investment in corporate knowledge creation into economic benefits. Thus IP-based appropriation strategies form the basis for creating wealth and competitive advantages for companies from their R&D and innovation activities. The development and implementation of sustainable strategies for IP exploitation require a concerted integration of the disciplines involved in order to achieve an interdisciplinary perspective on IP. In a knowledge-based economy, companies can only achieve a competitive edge by combining the economic, legal and technological sciences. IP management within such a holistic approach provides optimized appropriation strategies and thus essentially contributes to the creation of wealth within a company. Accordingly, IP management needs skilled managers who can combine the economics of intangible assets in an intellectualized environment with multidisciplinary knowledge in order to maximize the benefits of IP. A new type of competencies, skills and underlying knowledge enters the arena of management and management education. The increasing impact of intellectualized wealth creation by investment in knowledge, R&D and innovation followed by its exploitation and IP-based appropriation calls for seminal new education concepts. The CEIPI program "Master of IP Law and Management" offers such a new type of management education. It follows an intrinsically multidisciplinary approach to meet the challenges and requirements of the knowledge-based economy. This master program combines legal, economic and management sciences and includes lectures from leading scholars in the field of IP law and management. Its ultimate objective is to qualify experienced IP professionals for acting as practically-skilled IP managers with a sound knowledge of the principles of wealth creation in our knowledge-based economy.

Alexander J. Wurzer
Director of Studies, CEIPI | Adjunct Professor
Director of the Steinbeis Transfer Institute Intellectual Property Management

Concepts of the Studies

Intellectual property and economics in the present context are two disciplines that exist in parallel.

Experts are found in each discipline, but with a lack of mutual understanding and training. Both "worlds" are nowadays bridged by experts, called IP managers, who link both disciplines through knowledge and experience. The CEIPI studies pursue a holistic approach and engage experts for the developing market of an IP economy. They are experts for basic economic management processes with specific assets. Management is understood in the broad sense of an overall company management and accordingly divided into six general functions:

- 1. Strategy
- 2. Decision
- 3. Implementation
- 4. Organization
- 5. Leadership
- 6. Business Development

On the basis of this differentiation skills should be allocated to management functions, and relevant knowledge to the functions and skills. The teaching concept focuses on both areas, skills and knowledge, as relevant to business with intellectual property.

Skills can be allocated to the specific management functions as relevant to the practical work within IP management. The skills are thus determined by the daily challenges and tasks an IP manager encounters.

For example, the "Decision" function includes skills such as "valuation and portfolio analysis techniques", and "Organization" as a function requires skills to manage IP exploitation and licensing including economic aspects as well as contractual design and international trade regulations with IP assets.

Special knowledge of economy and law is required in order to implement and deploy these skills in business. This includes knowledge of economic basics such as function of markets and internal and external influence factors. Additional management knowledge is also included such as value-added and value-chain concepts.

The legal knowledge includes contractual and competition law, and special attention will be paid to European and international IP and trade law, e. g. litigation, licensing, dispute resolution. Following this concept, IP law and management can be combined in clusters formed of specific skills and knowledge defined within each management function.

The lectures have a high international standard; the lecturers possess a high reputation and long experience in the teaching subject with academic and practical backgrounds.

The top-level experts come from the fields of law, economics and technology. The experts and the students work closely together during the seminar periods. Exchange of experience and, as a consequence, networking are common follow-ups.

Participants & their Benefits

This European master's program was designed especially for European patent attorneys, laywers and other experienced IP professionals.

Its ultimate objective is to qualify experienced IP professionals to act as IP managers with the practical skills and knowledge to deal with the new challenges of wealth creation and profit generation. Participants acquire first and foremost a new understanding of how intellectual property works in business models and are conveyed the necessary skills to achieve the systematic alignment of IP management and business objectives.

The course provides an international networking platform for IP managers and in addition enables participants to build long-lasting relationships and to further develop relevant topics within the field of IP management. Being part of this international alumni network also offers new job opportunities and publication possibilities.

Past lecturers and academics

Prof. Jacques de Werra,
University of Geneva

Prof. Estelle Derclaye,
University of Nottingham

Prof. Christoph Geiger,
University of Strasbourg

Prof. Jonathan Griffiths,
School of Law, Queen Mary,
University of London

Dr. Henning Grosse Ruse-Kahn,
Faculty of Law, University of
Cambridge

Prof. Christian Ohly,
University of Bayreuth

Prof. Christian Osterrith,
University of Constance

Prof. Yann, Ménière,
CERNA, École des mines de
Paris

Prof. Cees Mulder,
University of Maastricht

Prof. Julien Penin,
University of Strasbourg, BETA

Prof. Nicolas Petit,
University of Liege

Prof. Alexander Peukert,
Goethe University,
Frankfurt/Main

Prof. Jens Schovsbo,
University of Copenhagen

Prof. Martin Senftleben,
University of Amsterdam

Prof. Bruno van Pottelsberghe,
Solvay Business School

Prof. Guido Westkamp,
Queen Mary University London

Prof. Alexander Wurzer,
Steinbeis University Berlin

Prof. Estelle Derclaye,
University of Nottingham

Prof. Ulf Petrusson,
Göteborg University

Past lecturers and speakers, practitioners and institutions

Arian Duijvestijn,
SVP BG Lighting Philips

Kees Schüller,
Nestlé S.A.

Thierry Sueur,
Air Liquide

Heinz Polsterer,
T-Mobile International

Dr. Fabirama Niang,
Total Group

Philipp Hammans,
Jenoptik AG

Dr. Lorenz Kaiser,
Fraunhofer-Gesellschaft

Leo Longauer,
UBS AG

Nikolaus Thum,
European Patent Office

Bojan Pretnar,
World Intellectual Property
Organization

Romain Girtanner,
Watson, Farley & Williams

Peter Bittner,
Peter Bittner & Partner

Prof. Didier Intès,
Cabinet Beau de Loménie, Paris

Malte Köllner,
Köllner & Partner Patentanwälte

Dr. Dorit Weikert,
KPMG

Keith Bergelt,
Open Innovention Network

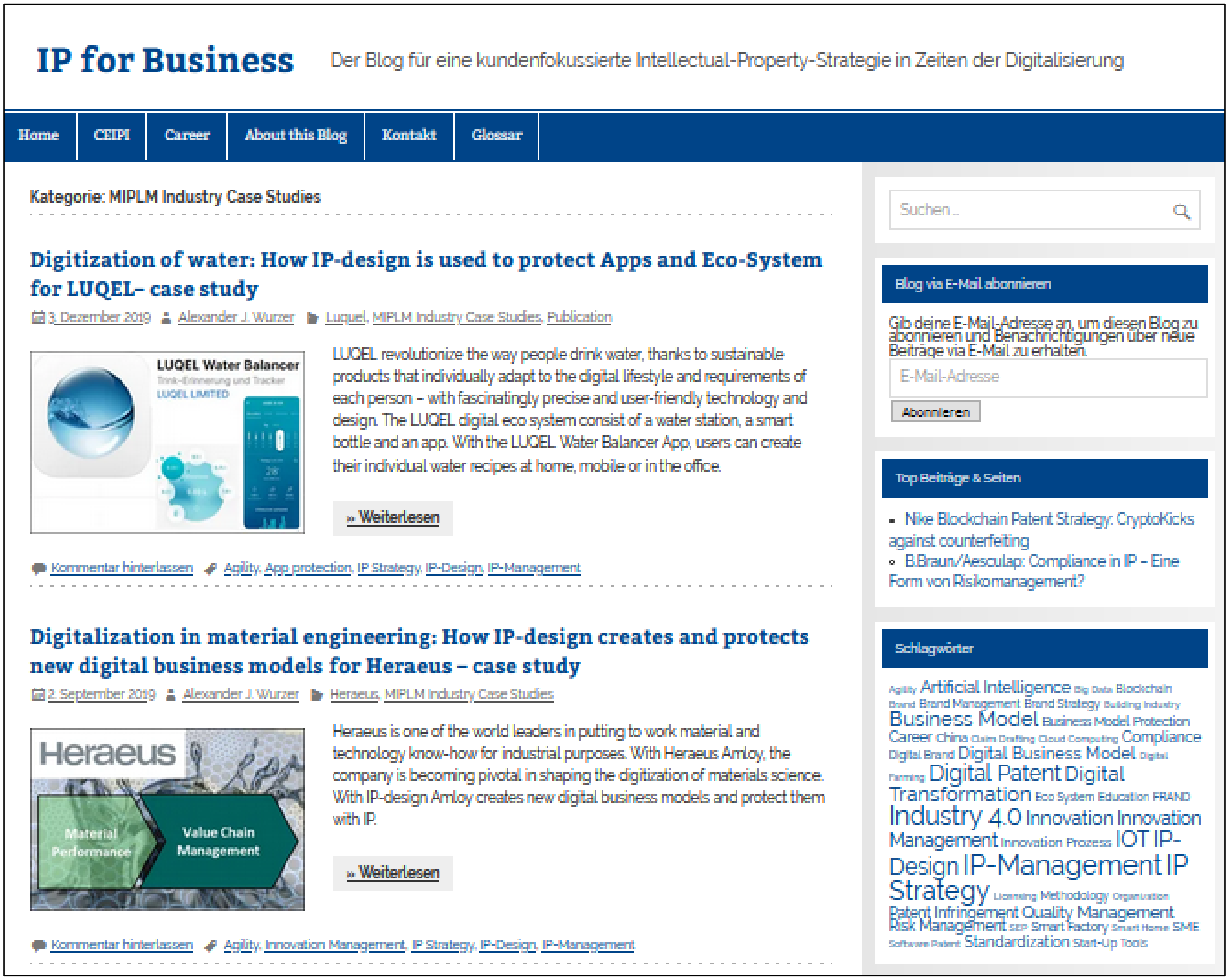
Selected companies

3M Europe S.A.
ABB Corporate Research Center
ABB Motors and Generators
AGC France SAS
Agfa Graphics
Air Liquide
Airbus Defence and Space
Akzo Nobel NV
BASF Construction Chemicals
Boehringer Ingelheim Pharma
British Telecom

Clyde Bergemann Power Group
Danisco/Dupont
DSM Nederland
Fresenius Medical Care
Groupe Danone
Jenoptik
Kenwood
Nestec Ltd
Novartis AG
Philips
Plinkington

PSA Peugeot Citroen
Rittal
Sanofi/Aventis
SAP SE
Schlumberger Etude&Production
ST-Ericsson
Tarkett GDL
Total S.A.
UBS AG
Unilever

Follow us on: http://ipforbusiness.org/



Weitere Fallstudien finden Sie unter

www.wurzer-kollegen.de/fallstudien