Industry Case Study Series on IP-Management

ARRI
Professional Motion Picture Equipment

By Alexander J. Wurzer & Franz Kraus

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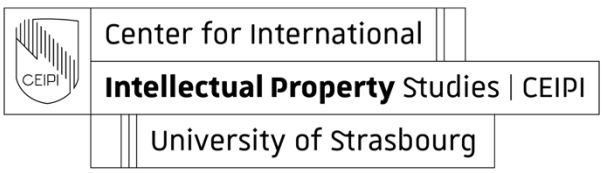

AUTHORS

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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.

Prof. Franz Kraus

Prof. Franz Kraus started his career as a design engineer working on television measuring instruments at Rohde & Schwarz in Munich, then as a scientific member of staff and project leader at the Fraunhofer HHI Research Institute in Berlin. After one year as a visiting scientist at Bell Lab's in the United States, he returned to Munich and joined Arnold & Richter 1983, where he set up a postproduction facility. From 1995 he was leading the design of the ARRILASER, ARRI's first digital product and some years later he was given R&D responsibility for all ARRI products. He is currently responsible for new technologies and innovation and serves as a member of the Executive Board of the ARRI Group.

In 2003 he was selected as a member of the IBC Council and shortly after as the head of the technology department at Munich Film Academy (HFF). Three years later in 2006 he received the Oskar Messter Medal for outstanding service as an initiator and promoter of digital film. In 2012 he was honored with the Academy Award of Merit for the design and development of the ARRILASER film recorder and became a member of the American Society of Cinematographers (ASC), as well as a trustee of the Fraunhofer Institute for Integrated Circuits IIS.

About ARRI

Today's leading supplier of professional motion picture equipment was founded by August Arnold and Robert Richter, two school friends who were enthusiastic about film, about 100 years ago. The company name is a combination of the first two letters of each of the two 19-year-old schoolmates' and film pioneers' surnames. The medium-sized company with 1,200 employees and a turnover of EUR 350m is headquartered in Munich and involved in film productions around the globe. ARRI manufactures and supplies film production equipment for rental and for sale. Apart from its popular and widely admired film cameras, the company's own product range also includes lighting solutions, film, lenses, scanners and camera accessories. In addition, ARRI operates the leading postproduction facility in Germany.

The fact that ARRI has won the prestigious Academy Awards (technical OSCARS) a total of 18 times is evidence of the exceptional position the company's technology enjoys in the world of cinematography. What is more, ARRI equipment was also used for most Oscar-nominated films in 2015. The brand's popularity with Hollywood's creatives is extraordinary. For five years, the Oscar for best camera went to cinematographers using ARRI cameras. Emmanuel Lubezki, one of the best cameramen in the world, for instance, won the Oscar in this category three times in a row, his latest victory in 2016 being for “The Revenant”, a film by Oscar winner Leonardo Di Caprio. What made this one so special were the extreme environmental conditions on set in Tierra del Fuego, South America, or Alberta, Canada. Temperatures of minus 30 degrees Celsius and virtually no

daylight: an absolute acid test for a film camera. The digital Alexa 65 used for this production is the result of research and development efforts costing millions of euros. The value of a single 65mm camera system is approx. half a million euros, and ARRI's business model foresees to make this camera available for rental only, at a day rate of more than EUR 2,000. The handmade Alexa 65 carries a 65-millimetre widescreen imager and is an absolute elite product. As few as 30 cameras of this model are in circulation worldwide with 40 to be added in 2016. Even in the most adverse conditions on set, this camera not only produces outstanding images but is also extremely reliable. Given the exceptionally high costs of a day of shooting, its reliability is a major advantage of this device. Due to a surge in digitization, which once threatened ARRI's existence and has now become one of the company's greatest opportunities, the use of professional digital motion picture film cameras in commercially successful, prize-winning movie productions has now become common practice.

The digital revolution in the film industry began towards the middle of the first decade of the 21st century and eventually led to full digitization. With the onset of the financial crisis in 2008 and a number of strikes in Hollywood and the commercial success of the 3D movie "AVATAR", the process accelerated. Basic arguments in favour of digitization include: faster production, less risks due to the immediacy of the image, better image quality and lower costs. By permitting immediate playback of the recorded images on set, digital technologies produce more reliable results. In addition, it is easier to store and duplicate data. Digitization eliminates entire process steps such as processing and scanning of camera film negative. The digitized value chain in the field of film production has also led to significant changes in ARRI's competitive environment.

While traditional mechanical cinematographic cameras expose a roll of perforated chemical photographic film to light, a digital camera contains very few mechanically relevant components. A significant breakthrough in the field of traditional cinematographic cameras was achieved by ARRI's head designer Erich Kästner in 1937, when he designed the first ever single-lens reflex system for industrial production. Thus permitting meaningful viewfinder images while the camera is running. Another milestone in the field of mechanical cameras was the "talkie". In 1968, Kästner managed to achieve a sufficiently high degree of integration to trigger the birth of a shoulder camera with a sound recording function in 35 mm motion picture format – yet another technological achievement which was honoured with an Oscar. Along with ARRI, American competitor Panavision dominated the market for 35 mm cinematographic cameras until the beginning of the digital revolution.

ARRI´s lighting business is about half the size of its camera business and also exists close to 100 years. At around the turn of the century ARRI explored the technical opportunities for digital capture and began to

study how solid state lighting technology could be applied for film lighting products, where traditionally incandescent, discharge and fluorescent technologies are used. From the beginning ARRI concentrated on multi-channel approaches, where monochrome light is combined out of several individual LEDs which are emitting a different light spectrum each. This approach offers color tune-ability and, with the proper correction algorithms and know how applied, ensures that neither aging of the LEDs nor a spread of the LEDs' characteristics will lead to recognizable color shifts between luminaires. This complex approach was also meant to ensure quite high barriers for competitors to enter the market on an equal product level.

First products were offered in 2006, the perfection and features were admired, but the low light output and the high price were prohibitive for volume sales. With the introduction of the L-series Fresnel type focusable lamp heads in 2011, sales of ARRI LED products, especially in TV studios, went up significantly. With the product launch of the also multi-channel LED based "Skypanel" in autumn 2015, ARRI has a lighting product which by now already makes up more than 50% of its sales.

The challenge

In 2000, Japanese electronics giant Sony decided to enter the niche market for professional cinematographic cameras. The company's roots are in consumer electronics. Sony acquired a manufacturing licence for transistors from Bell Laboratories and started out by supplying transistor radios in the 1950s. The Sony brand is synonymous with products like the Walkman, the MiniDisc player, the PlayStation, Xperia smartphones and the Compact Disc (CD) (developed in cooperation with Philips). In 2015, the company achieved a turnover of 8 million Yens and counted more than 130,000 employees worldwide. Since the 1990s, Sony has also been active in the consumer markets for digital cameras and camcorders. Sony's corporate strategy is geared towards integration with the value chain in the entertainment industry. In line with this strategy, the company acquired CBS Records in 1988, the Columbia Pictures film studios in 1989, and Metro-Goldwyn-Mayer as well as United Artists in 2005. Sony's positioning in the market for digital cinematographic cameras is also consistent with this strategy and puts competitive pressure on ARRI. Sony's IP strategy is aimed at setting standards, which is a common strategic approach in the entertainment industry. The aim within the scope of the Hub monopoly is to standardize technologies to such an extent that investing in these technologies becomes an attractive option for various manufacturers. Access to the standard will be available through licensing, and market positioning, market entry barriers and profitability will be controlled via licensing policies, access technologies such as manufacturing techniques, drives, decoders and encoders, etc. Sony is attempting to establish such an image data standard as an alternative to ARRI's RAW format.

The second key competitor is US firm Red Digital Cinema Camera Company (RED), which was founded by the former owner of eyewear label Oakley Inc. in 2005. The market entry of RED has brought about further changes to the market. The quality delivered by RED cameras is significantly inferior to that of ARRI products. However, these cameras are also considerably less expensive. In conjunction with digitization, this widens the market to a great extent, allowing virtually anybody to become camerapeople, using their own camera in an increasing number of cases. While high-end camera systems for professional cinema productions used to be half a million euros or over, prices for entry-level technologies have fallen dramatically. The traditional rental model for film production equipment is becoming less and less relevant. With the emergence of speciality film production companies, stunt firms and special effects studios, the market for digital film cameras is differentiating further. The significance of large TV productions has increased, with 45% of all cameras being used in this market. Simultaneously, IP use is becoming more and more aggressive. Especially American player RED is putting an ever increasing

emphasis on IP and enforcing prohibition rights.

As a result of its business model as a camera manufacturer and vendor and supplier of rental equipment, ARRI is integrated in a complex value chain. One of the company's key competitors, for example, is Panavision, a player that is active in equipment rentals and in the production of cameras and optical components. At the same time, however, Panavision is also ARRI's customer. ARRI maintains a close cooperation with Zeiss in the field of lens development. The company's breakthrough in the market in the 1960s and 1970s is owed not least to the high quality and availability of its lenses. ARRI's enormous wealth of experience in using camera lenses in film production and Zeiss's optics expertise have led to ever increasing perfection.

The most important customers, i.e. camera rental firms, attach great importance to flexible, modular systems which simultaneously offer the reliability of a one-stop solution. A variety of accessories related to cameras and lenses, including guides, data recording devices, remote controls, lens accessories, wireless transmission devices, etc., ensure functionality on set.

The ARRI brand stands for professional motion picture cameras which offer excellent image quality, product quality, reliability, worldwide service and safe and easy handling – a set of qualities which remains unmatched by ARRI's competitors. In film production, it is not just a robust camera that is needed, but great importance is also attached to the various capabilities such as a wide dynamic range, high-quality colour reproduction (for example with regard to skin tones)

highresolution to resolve fine image detail; selectable framerates for slow motion and timelaps and reliable, minimal-noise lens motors for minimal interference in sensitive sound recordings.

As a result of digitization, the transition of film production towards an IT-based industry has become unstoppable. Production is increasingly about file sizes, data compression, data transfer and data storage. These considerations are also what drives the debate surrounding the 4K format. In the case of an ARRI Alexa, for instance, some 10 GB of data per minute of footage are produced in ARRI RAW raw data format using a 2880x1620 image sensor at 23.976 images per second.

Project: IP culture as part of a niche strategy

As a traditional company with a highly reputable brand, ARRI has adopted a highly specific niche focus. The company focuses on those priorities and product characteristics which are critically important to the end-user and essential for productivity in film production. ARRI's mission is to develop a perfect understanding of its niche and to provide users with (often unique) high-performance equipment in an optimal fashion. As a camera brand, ARRI focuses on being world leader in professional imaging products and services for the entertainment industry. Product ergonomics and the associated direct relationship with the cameraperson play a particularly important role. Ultimately, it is the recorded image that counts in film production, and the cameraman and his camera are responsible for it. ARRI's results-oriented focus translates into the following product characteristics, for example:

- The size and weight of the camera must be appropriate for its application.
- The viewfinder shows the camera image with no or very little delay (less than one frame)
- The viewfinder image is significantly larger than the recorded camera image to identify unwanted objects that could be captured by the camera and ruin the desired outcome.
- If the camera is to be held by hand, it must be perfectly balanced and the controls

must be placed where the operator would expect them.

- Assistants need access to certain control elements and status displays more frequently than others; it is therefore important that these displays are clearly visible.
- Operational control elements must be sufficiently large and user-friendly to permit operation when wearing gloves in Arctic temperatures or with sweaty fingers in the Amazon region.
- Cameras are often operated and used close to the human body and must therefore feature an organic form and design language.
- In addition, they should only feature functions which are really needed. The complexity of the camera from the user's perspective must be as low as possible.

ARRI's niche strategy is affected by the dynamic development of technology, the changing competitive environment, changing distribution channels and changes in customer structure and customer requirements. As a result of the effect of these external dynamics on the company's niche strategy ARRI must develop and optimize its IP strategy and culture. ARRI is a player with comparatively weak resources in its competitive environment. In addition, the company must always protect its reputation when enforcing its own rights. If, for example, a film set is supplied with unlicensed or counterfeit equipment and ARRI files for an injunction in order to demand the exclusive use of original equipment, the company ultimately causes delays to the production of a film and generates additional costs. This is not necessarily understood as professional and positive constructive behaviour of an equipment supplier in the industry. If, on the other hand, quality issues or personal injury result from the use of counterfeit equipment, this could have negative implications for the reputation of the ARRI brand. The ability to enforce one's own legal positions must always be prioritized over any potential damage to the brand and the interests of end customers from the film production industry. This way of thinking must be anchored in ARRI's IP culture.

In order to develop guidelines for an IP culture for ARRI, it is important to ask the fundamental question of how useful it is for the company to use IP. The following factors must be considered in this respect:

- Which IP-related issues and challenges are affecting ARRI's competitive position?
- What are the strengths and weaknesses of ARRI in these respects?
- What are the risks involved in maintaining a "business as usual" strategy in the field of IP?
- Which opportunities could arise for ARRI from a focused use of IP?

What should follow this analysis is an analysis of the IP organization in order to determine the level of maturity and address any challenges. From this analysis, a structure can be derived which can be used in order to cope with the anticipated risks and threats and to leverage strengths in order to seize opportunities.

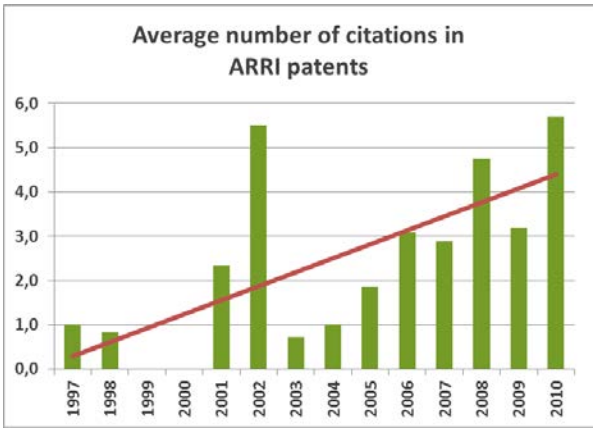


Fig. 1: Average number of citations in ARRI patents from 1997 to 2010.

ARRI's successful niche strategy in an increasingly complex technological environment is reflected in the patent literature. When looking at the average number of citations in ARRI patents, a continuous increase in citation frequencies can be observed. This is an indication of the increasing complexity of the technologies described in the corresponding patents.

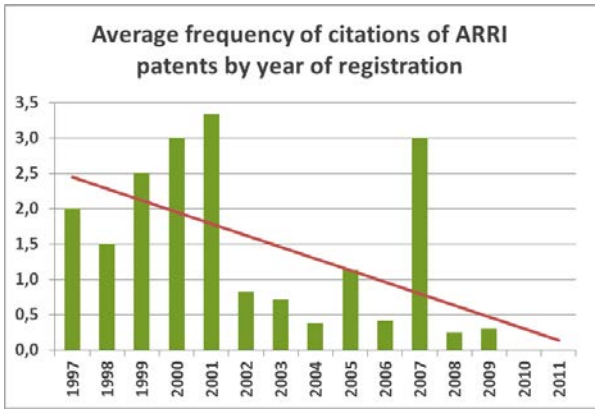
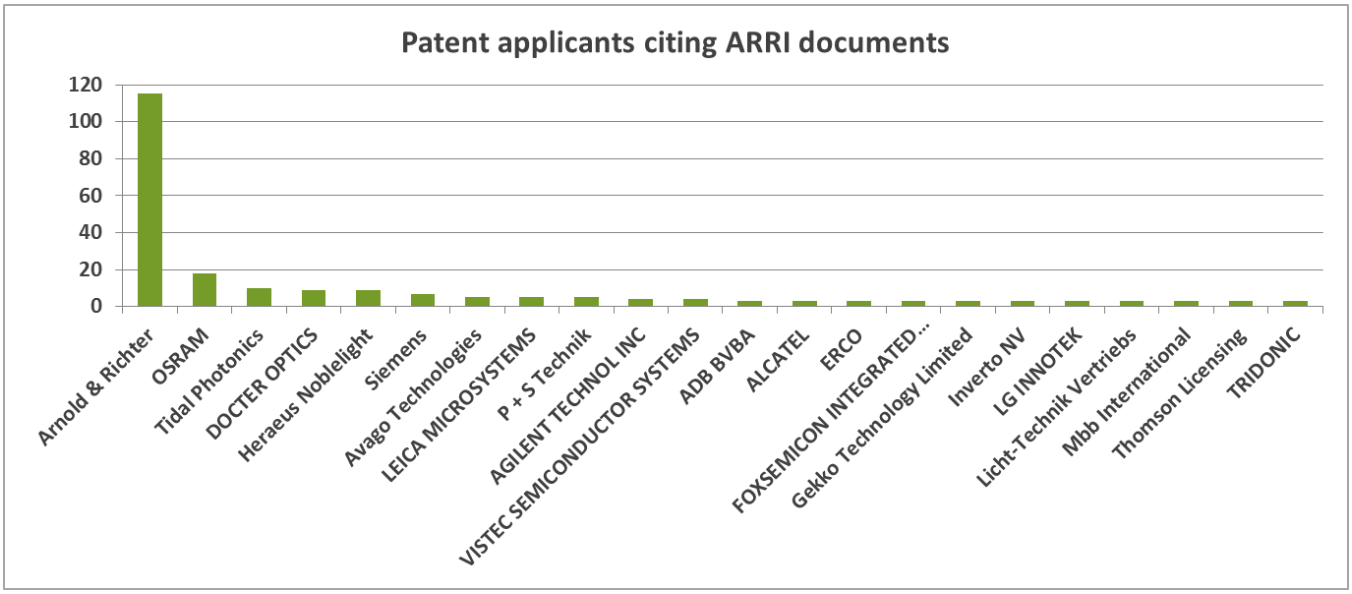


Fig. 2: Average frequency of citations of ARRI patents from 1997 to 2010.

During the same period, the average frequency of ARRI citations in third-party patents decreased. This points at the niche strategy pursued by ARRI. ARRI's technological leadership is further emphasized by the very wide range of companies citing ARRI patents and thus highlighting the broad influence of ARRI's technological expertise.

For the purpose of performing this analysis, patent applications as well as citations of other patent literature in the patent documents are taken into account. In their patent applications, patent applicants must state the known prior art to the solution for which patent protection is sought. This prior art is usually stated by citing older patent documents. Within the scope of the examination procedure, the patent examiner verifies whether known solutions that anticipate the patent-pending technology exist and cites older patent documents. The analysis of citation structures is therefore an appropriate means of investigating relationships and dependencies between patent documents.



ARRI is exposed to external influencing factors of significant IP relevance. Those influencing factors were selected, described and evaluated by means of interviews with experts. Examples of such external factors are:

Topic	Short description	IP relevance
Corporate strategy/objectives	No clearly defined corporate objectives regarding IP use in expanding core competencies and/or exploring new markets	+
Brand image	Positive brand image of ARRI, shaped by historical technological advantages	++
Competitors	Several (some of them very large) competitors operating a focused IP management and enforcing their IP with some degree of aggression	++
Future market China	Increasingly important market (especially for lighting) due to a growing number of film productions; emergence of knock-off products	+
Shorter product/technology life cycles	Reduction of product/technology life cycles from more than 10 to less than 3 years	+

Topic	Short description	IP relevance
Technological edge	Significant competitive advantage for multichannel LED	+
Technology trends	Limited R&D capacities compared to the competition but potentially research-intensive technology trends; potentially new areas of application which are already covered by other companies	+
Technology migration	Migration of technologies from the field of consumer electronics to professional cameras	++
Technology standards	In "film times" the industry was strongly influenced by standards regarding formats and sizes	+

Table 1: Overview of influencing factors from ARRI's competitive, technological and market environments

Taking into consideration the essential objective (risk, return, cost) within this scenario, the IP framework strategy provides direction for a concrete IP strategy design. To implement such an IP strategy, the company requires a number of IP management functions which interact with each other in meaningful ways. The respective dominance of the three performance indicators (return, cost, risk) results in different types of framework strategies.

It would be advisable for ARRI to use a differentiation approach that fits the company's niche positioning as part of its competitive strategy and simultaneously serves as its dominant IP strategy. Using a differentiation approach as an IP strategy involves the basic objective of designing USPs and protecting them from imitation by means of IP. Relevant strategic tools include suppression of imitation, management of infringement risks, design of proprietary market positions and communication of USPs. The main control variable is the contribution IP makes to the economic value added.

In order to implement its framework strategy, ARRI has taken the following measures:

- **Evaluation/improvement**

  Devising an IP strategy is a key prerequisite for establishing a differentiation centre. It is derived from the objectives of corporate strategy and strictly aligned with

the pursued business model. This strategy is the starting point for coordinating all IP activities, and patent application turns from an invention-driven process into a process which is strategically oriented at customer benefits. This means that, regardless of whether or not an actual invention disclosure exists, technological solutions are identified and protected which permit sustainable competitive differentiation.

- **Risk limitation**

  By focusing on the development projects with the greatest customer relevance and ensuring adequate protection of the solutions found, competitive differentiation can be achieved in important competitive positions. In addition, the further development of competitors can be blocked by means of patents if clear objectives are derived from the IP strategy. This does not necessarily require the development of production-ready proprietary solutions but should rather be seen as an attempt to anticipate essential steps in competitors' development activities and to prohibit such developments by means of prohibitive patents.

- **Exploitation**

  Continuous controlling by means of suitable KPIs ensures the sustainability of the benefits achieved.

Action

An active search for elements of the solution which are relevant for the customer's purchase decision is performed. The aim is to achieve greatest possible protection of these elements against imitation by means of prohibitive rights. Since this is often not possible with products which are already available in the market, starting points for further R&D activities can be generated from the implementation of the IP strategy. The practical implementation of the standards strategy bundle in the differentiation centre usually requires a high degree of maturity in corporate IP management. The maturity of IP management at ARRI was examined by means of interviews and compared with the target requirements. The maturity analysis was performed based on the scheme and target requirements set out below (green fields):

	Level 1 No formal approach	Level 2 Reactive approach	Level 3 Formal systematic approach	Level 4 Systematic improvement	Level 5 Sustainable contribution to economic value added
Goal definition	No differentiation between IP filing and IP strategy	No (pro)active strategy	Rigid strategy definition	Derivation from the innovation project	Derivation from the business model
Risk management	No systematic risk definition	Case-by-case risk assessment	FTO for inventions or technologies	FTO for concepts and business activities	FTO/FTC for business model
Responsibility	No defined/distributed responsibilities	Case-by-case responsibilities	Innovation and IP responsibility not coordinated in agreed goals	Responsibility for IP success (innovation)	Responsibility for IP success (business)
Formalization	No process documentation	No uniform tool landscape	No integration of IP and innovation	Integration of IP and innovation	IP strategy as part of the corporate strategy process
Process quality	No systematic information management	Information management without data collection	IP KPIs are used as a basis for reporting	Innovation KPIs are used as a basis for reporting	Integrated information system for all decision-makers
Consistency of strat. levels	No documented strategy	Case-by-case	Separation of IP and innovation	Innovation defined IP strategy goals	IP strategy goals are derived from corporate strategy
Budgeting	No separate IP budget	Not derived from innovation goals	No effect-oriented controlling	Effect-oriented controlling based on the innovation project	Effect-oriented controlling based on the business model

Table 2: Structure of a maturity analysis performed by IP management with target requirements for the organizational implementation of a differentiation strategy.

Summary and benefits for ARRI

ARRI is a company with a long-standing tradition, technologically sophisticated products and a positive, technology-oriented brand image. The company's products are primarily purchased or used in film production because of their outstanding technological quality and high productivity. ARRI's brand image is characterized by features such as ergonomics, robustness, reliability, high image quality, wide dynamic range, excellent colour reproduction (especially with regard to skin tones), a profound understanding of how the products are used, worldwide service and 100 years of tradition and experience. The overall brand image is shaped by the technological and quality-related superiority of ARRI cameras and lighting products. Not least because of its strong brand charged with technical attributes, ARRI has managed to enforce premium prices in the market.

The present analysis shows both significant IP potentials and IP risks for ARRI. Relative to the current expenditure, a differentiation strategy results in a positive opportunity and risk balance in ARRI's niche position. Based on the formula “implement what's feasible”, the content-related and organizational design of ARRI's IP efforts was optimized for the majority of IP processes in order to increase effectiveness while simultaneously reducing efficiency by reducing additional IP-related R&D work.

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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
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Agfa Graphics
Air Liquide
Airbus Defence and Space
Akzo Nobel NV
BASF Construction Chemicals
Boehringer Ingelheim Pharma
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DSM Nederland
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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
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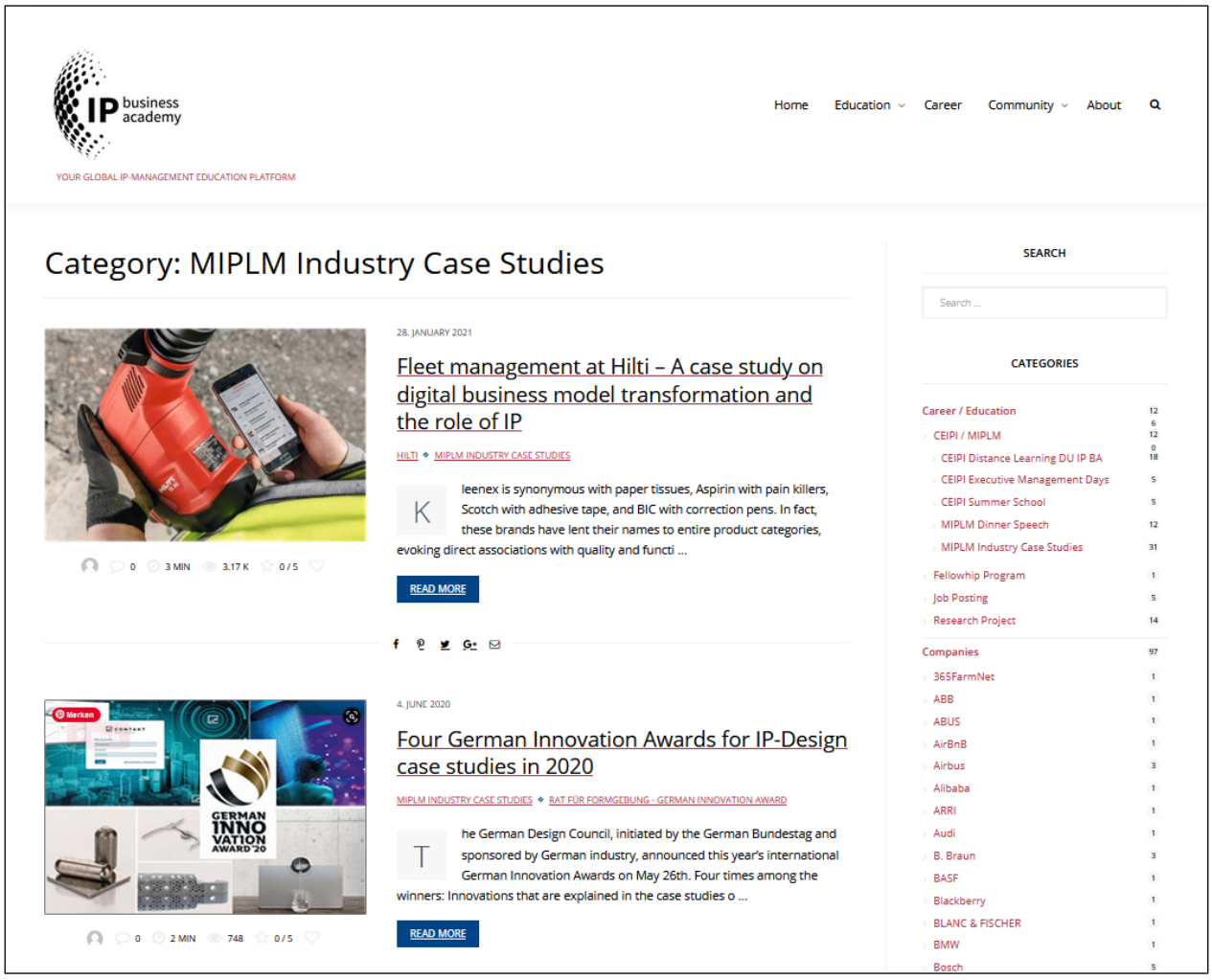

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