

Green Innovations and IPR Management

EDITED BY

ANDREE KIRCHNER & IRIS KIRCHNER-FREIS



Wolters Kluwer

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Andree Kirchner
Iris Kirchner-Freis



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MLS Legal GmbH – Rechtsanwalts- und Fachanwaltsgesellschaft, Bremen/Berlin, Germany is a specialized law firm in copyright and media law, IT law and intellectual property law advising and representing companies and institutions. www.mls-legal.de

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Founded in Geneva in September 1996, the **International Centre for Trade and Sustainable Development (ICTSD)** aims to influence the international trade system such that it advances the goal of sustainable development. As an independent, non-profit and non-governmental organization, ICTSD engages a broad range of actors in ongoing dialogue on trade and sustainable development policy. In advancing its mission, ICTSD has become a leading broker of knowledge and information on trade policy and sustainable development.

www.ictsd.org

Prof. Dr. h.c. Dr.-Ing. Herbert Birkhofer is the former head of the Institute of Product Development and Machine Elements at Technische Universität Darmstadt and can draw upon more than fifteen years of experience in the field of eco-design. He was initiator and spokesman of the Collaborative Research Centre 392 'Design for Environment – Methods and Tools' as well as the Transfer Unit 55 'Optimized Processes, Methods and Tools for the Development of Environmentally-Friendly Products', in which path-breaking work has been done. As the first president of the worldwide community 'the Design Society', member of 'Berliner Kreis' for promoting product innovations in the German industry as well as co-editor of the journal 'Konstruktion', Prof. Birkhofer is one of the most well-known professors in the field of engineering design.

The **Institute of Product Development and Machine Elements (pmd)** is a chair at the Department of Mechanical Engineering at Technische Universität Darmstadt. Being a teaching institution on the one hand, pmd is in charge of the education of

engineering students in both fields of products development and machine elements. On the other hand, the institute has a long research history in the fields of design methodology, knowledge management, empirical design research, methodology transfer as well as antifriction bearing research. The vision of pmd is a holistic product development in terms of technical, economic and environmental superiority of products and processes. All research results are applied in practice in order to secure the feasibility of the methods and promote the transfer of theoretical knowledge in the industry. Therefore, pmd has always had a close collaboration with industry partners as well as other research institutions.

www.pmd.tu-darmstadt.de

Dr. Ing. Giancarlo Caratti is currently Head of the IP and Technology Transfer' Unit at the Joint Research Centre of the European Commission, which manages the Intellectual Property of the Commission, including patents, trademarks, copyrights, denomination of origin, etc. In his previous assignments, Mr Caratti managed other JRC units, namely: 'Institutional and International Relations', 'Enlargement' and 'Policy Support Strategy'. Mr Caratti has started his career in the European Commission in 1986 within the unit 'Renewable Energy R&D' as the Head of the Wind Energy R&D Programme. In 1996 he was appointed Advisor to the Director of the Institute for Prospective Technological Studies (Seville) in charge of coordination of the scientific work programme and relations with the customers DGs. He then took over the responsibility of other central units in the JRC, namely the 'Policy Support Strategy' in 1999 and 'Enlargement and Associated Initiatives' from 2001 to 2007. Mr Caratti's educational background is in Mechanical Engineering, with specialization in the Energy field. Before joining the Commission he worked in the Faculties of Engineering of Florence (1982) and Pisa (1984–1985), teaching and researching on Industrial Systems Engineering and Energetics. In 1983 he spent one year as visiting scholar at the Georgia Institute of Technology, Atlanta, USA in the field of Energy Modelling. In 1985 and 1986, he worked as project engineer at Techint, Italy's largest private engineering company based in Milan. Mr Caratti has over sixty publications in international conferences, journals, etc. and is editor of various technical books.

The **European Commission** is an institution representing the interests of the European Union as a whole. It proposes new legislation to the European Parliament and the Council of the European Union, and it ensures that EU law is correctly applied by member countries. The term 'Commission' refers to both the twenty-seven Commissioners and the wider institution itself. The Commission has the right of initiative to propose laws for adoption by the European Parliament and the Council of the EU (national ministers). In most cases, the Commission makes proposals to meet its obligations under the EU treaties, or because another EU institution, country or stakeholder has asked it to act. From April 2012, EU citizens may also call on the Commission to propose laws (European Citizens' Initiative). Before making proposals, the Commission consults widely so that stakeholders' views can be taken into account. In general, an assessment of the potential economic, social and environmental impact of a given piece of legislation act is published along with the proposal itself. The principles of subsidiarity and proportionality mean that the EU may legislate only where action is more effective at EU level than at national, regional or local level, and

then no more than necessary to attain the agreed objectives. Once EU legislation has been adopted, the Commission ensures that it is correctly applied by the EU member countries.

<http://ec.europa.eu>

Susanne Heutling studied environmental science at the University of Lueneburg (Germany) and has been working for the Federal Environment Agency since 2007. She is responsible for maintaining and enhancing environmental labelling schemes on a national and European level (Blue Angel, EU Eco-label).

'For our Environment' is the mission statement of the **German Federal Environment Agency (UBA)**. Founded in 1974, the UBA is Germany's central environmental authority. UBA sees itself as an early warning system that identifies potential future impairments of human beings and their environment, and propose practical solutions. Important tasks of UBA include the scientific support of the Federal Government and the Federal Environment Ministry and the information of the public on various topics of environmental protection.

www.uba.de

Dr. Ximena Hinrichs LL.M. has been a Legal Officer of the International Tribunal for the Law of the Sea since 1997. Previously, she worked for the Legal Office of the International Maritime Organization. Dr Hinrichs holds a Law Degree from the University of Concepción, Chile, and an LL.M. and Ph.D. from the University of Hamburg. She is lecturer for law of the sea at the University of Bremen and at the Hafencity University of Hamburg. She has written articles and reports on international law and law of the sea.

The **International Tribunal for the Law of the Sea (ITLOS)** is an independent judicial body established by the United Nations Convention for the Law of the Sea to adjudicate disputes arising out of the interpretation and application of the Convention. The Tribunal is composed of twenty-one independent members, elected from among persons enjoying the highest reputation for fairness and integrity and of recognized competence in the field of the law of the sea.

www.itlos.org

Dr. Konstantinos Karachalios is the Managing Director of **IEEE-Standards Association**, an internationally-recognized leader within the standards development and intellectual property communities, and has extensive expertise in public policy, strategic planning and the non-for-profit sector. His leadership efforts played a crucial role in the successful international cooperation between Germany and France in the areas of coordinated research and scenario simulation pertaining to large-scale nuclear accidents. Following the success of these cooperative international endeavours, he joined the European Patent Office (EPO). It was with the EPO, his most recent tenure, that Konstantinos encountered some of his greatest successes. Among the highlights of his career within the EPO are his creation and leadership of the EPO's International Academy, the Department of Technical Assistance to the Middle East and Africa, and the Bureau for Public Policy Issues, and his guidance and insights as the EPO's envoy to a number of United Nations organizations. As scenarios analyst and co-editor of the EPO's book 'Scenarios for the Future: How might IP regimes evolve by 2025? What global legitimacy might such regimes have?', Konstantinos contributed to repositioning

these important issues, reframing the way in which they are debated in the global arena, and initiating and coordinating strategic responses to the challenges raised by those discussions.

Konstantinos earned his Ph.D. in Energy Engineering (Nuclear Reactor Safety) and his master's degree in Mechanical Engineering for the University of Stuttgart.

Huseyin Kebapci (BA, LL.M) is currently working at the **European Commission** as a Legal Officer. He is in charge of providing the European Union institutions with expert advice and support in the field of Intellectual Property Rights and Technology Transfer. He is the author of the internal legislation and standard operating procedures which reform IPR management practices within the European Commission, and is currently facilitating the overall implementation and change management process. He is also in charge of managing part of the European Commission's patent portfolio, and instructs attorneys in legal proceedings. In his previous assignments at the European Commission, Mr Kebapci served as the Policy Officer in charge of overseeing the Cypriot Government's social inclusion, social protection, healthcare and long-term care strategies. Mr Kebapci has an academic background in politics and law, with specialization in international jurisdictional law. Before joining the European Commission, he worked as a tutor at the University of Nottingham in the UK. Mr Kebapci is a member of the Editorial Board of 'The Bulletin', a quarterly publication of the European IPR Helpdesk.

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Prof. Eric L. Lane is an intellectual property lawyer and registered U.S. patent attorney in San Diego, California. He counsels companies and entrepreneurs in patent, trademark and copyright matters, assisting them in protecting the intellectual property assets critical to their businesses. He specializes in helping technology companies build, grow and managing their patent and trademark portfolios, with a particular emphasis on renewable energy and other areas of clean technology. Mr Lane is the founder and author of Green Patent Blog – www.greenpatentblog.com – a web site dedicated to discussion and analysis of intellectual property issues in clean technology

and renewable energy and author of *Clean Tech Intellectual Property: Eco-marks, Green Patents, and Green Innovation*, published by Oxford University Press. He has published articles on a wide range of legal subjects in such publications as the *Berkeley Technology Law Journal*, the *John Marshall Law School Review of Intellectual Property Law*, the *Santa Clara Computer & High Technology Law Journal*, the *Duke Law & Technology Review*, *New York Intellectual Property Law Bulletin*, *New York State Bar Association Labour & Employment Newsletter* and *Mealey's (Lexis-Nexis) Litigation Report on Intellectual Property*, *IPLaw360*, *New Matter* and the *San Diego Daily Transcript*. Mr Lane is an adjunct professor at Thomas Jefferson School of Law and a frequent speaker on issues at the intersection of intellectual property and clean tech / climate change. Mr Lane is a graduate of Wesleyan University and the George Washington University Law School.
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'For our Environment' is the mission statement of the **German Federal Environment Agency (UBA)**. Founded in 1974, the UBA is Germany's central environmental authority. UBA sees itself as an early warning system that identifies potential future impairments of human beings and their environment, and propose practical solutions.

Important tasks of UBA include the scientific support of the Federal Government and the Federal Environment Ministry and the information of the public on various topics of environmental protection.

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The **Institute of Product Development and Machine Elements (pmd)** is a chair at the Department of Mechanical Engineering at Technische Universität Darmstadt. Being a teaching institution on the one hand, pmd is in charge of the education of engineering students in both fields of products development and machine elements. On the other hand, the institute has a long research history in the fields of design methodology, knowledge management, empirical design research, methodology transfer as well as antifriction bearing research. The vision of pmd is a holistic product development in terms of technical, economic and environmental superiority of products and processes. All research results are applied in practice in order to secure the feasibility of the methods and promote the transfer of theoretical knowledge in the industry. Therefore, pmd has always had a close collaboration with industry partners as well as other research institutions.

www.pmd.tu-darmstadt.de

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BITKOM is the voice of the information technology, telecommunications and new media industry in Germany. BITKOM represents more than 1,700 companies, of which 1,100 are direct members. They include nearly all global players as well as more than 1,000 powerful small and medium-sized enterprises and a lot of founder-managed

creative companies. BITKOM's members generate an annual turnover of EUR 135 billion in total, exporting high-tech goods and services worth EUR 50 billion per year.

BITKOM provides a wide-range powerful network that brings together the best minds and top companies of the digital world. BITKOM organizes a permanent exchange between experts and executives, offering its members platforms for cooperation and for interaction with key clients.

www.bitkom.org

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The **University of Genoa** is a well established institution in the regional territory, with local campuses in Savona, Imperia and La Spezia. High quality teaching and research are at the heart of its activities, with the latter being key to innovation and competitiveness and the possibility to reach results of recognized excellence. The University as a whole offers circa 300 teaching curricula and foreign students count for more than 8% of the total enrolments, making it a pole of attraction nationally as well as internationally. A new by-law, entered into force on 29 December 2011, provides for its subdivision in five Schools and twenty-two Departments, including the Department of Law. Within such Department, more than eighty teaching staff (full professors, associate professors, researchers and contract professors) cover all areas of law, including public and private law, international and EU law, criminal law, commercial and corporate law, (civil and criminal) procedural law, history, philosophy and sociology of law.

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www.oami.europa.eu

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The **Federal Ministry of Education and Research** aims to strengthen research in Germany, to promote talent, and to create jobs and improve the quality of life through new technologies. The Ministry's staff of around 1,000 in Bonn and Berlin are contributing their great commitment and outstanding expertise to achieving this goal. The Federal Ministry of Education and Research has been headed by Federal Minister Prof. Dr Annette Schavan since 22 November 2005. She is supported by Parliamentary State Secretaries Thomas Rachel and Dr Helge Braun as well as the Permanent State

Secretaries Cornelia Quennet-Thielen and Dr Georg Schütte. The Federal Ministry has around 750 staff members at its main office in Bonn and around 250 at its Berlin office. www.bmbf.de

Ragnar Unge has been the CEO of Eco-labelling Sweden for nearly twenty years. He started his career there as information- and marketing manager with the mission to get the Nordic Eco-label well known and well-respected of the consumers in Sweden. And, as step number two, to get the label attractive and worth going for by the producers. Ragnar has, as a marketing man, succeeded to really get the label being used as a marketing tool by the producers and license holder. Today the label is used of many well-known companies, in spite them having their own strong brand. Before he came into the world of eco-labelling, he worked as a marketing director of a Swedish bicycle producer. But he started as a teacher and has a university graduation as such, later supplemented with one in economy and marketing.

Eco-labelling Sweden, which is a not-for profit organization, were established by the Swedish government to handle the Nordic Ecolabelling, the Swan, and the EU Ecolabel, in Sweden. In the beginning the company was connected to the Swedish Standard Institute, but is now on its own. Ecolabelling Sweden is one out of five Nordic organizations that together handle the Swan in the Nordic countries. Eco-labelling Sweden has over fifty employees working with eco-labelling criteria, marketing, control of product and information to consumers. In Sweden more than 1400 companies has an Eco-labelling licence, and the consumer awareness is extremely high; 98% recognize the logo and nine out of ten can give a fairly good description of what the labelling is about. The company get a small subsidy from the government, but have to raise more the 90% of the revenues from application and licence fees. www.svanen.se

Anja von der Ropp is a Legal Officer working in the Global Challenges Division of the World Intellectual Property Organization (WIPO), whose key mandate is to ensure that WIPO contributes its specific expertise to the global debates about major public policy issues, including, in particular, climate change, food security and public health. Her activities at WIPO currently focus on climate change, primarily an initiative through which WIPO further promotes innovation and enhances technology transfer mechanisms. Ms von der Ropp studied law at the University of Konstanz, Germany, where she graduated in 1999. She obtained her bar exam in 2001, after which she worked as a journalist, responsible for a newsletter on European law and policy in the area of health. She completed a Master's Degree (LL.M.) at the College of Europe specializing in intellectual property law. Before joining WIPO in 2005, she worked as a researcher and lecturer at the University of Bremen.

WIPO, a United Nations specialized agency, is dedicated to the promotion of innovation and creativity for the economic, social and cultural development of all countries, through a balanced and effective international intellectual property system. WIPO promotes the development and use of the international IP system through:

- Services: it runs systems which make it easier to obtain protection internationally for patents, trademarks, designs and appellations of origin; and to resolve IP disputes.

- Law: it helps develop the international legal IP framework in line with society's evolving needs.
- Infrastructure: it builds collaborative networks and technical platforms to share knowledge and simplify IP transactions, including free databases and tools for exchanging information.
- Development: it builds capacity in the use of IP to support economic development.

www.wipo.int

Shulin Zhao has received her diploma in industrial engineering and management at Technische Universität Darmstadt in 2009, with majors in management and product development. She was a research associate at the Institute of Product Development and Machine Elements at Technische Universität Darmstadt from 2009 to 2012. During this time, she worked in the field of eco-design including teaching, research as well as industry projects, and has published various articles in the field of developing environmentally-friendly products. Her research focus was the development of an eco-design methodology for small and medium-sized enterprises, which is also her dissertation topic. Since 2012, Shulin Zhao has been serving as CEO of a measuring technology company, with locations in Germany and China.

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www.pmd.tu-darmstadt.de

Preface

*As human activity caused the problem,
so too can human activity find the solutions.
Green innovation – the development and
diffusion of technological means to
tackle climate change (...)'*
(Mr Francis Gurry, Director, WIPO)

Our desire to edit a book on 'Green Innovations and IPR Management' was born in 2009 in the context of the World Intellectual Property Day 2009 which focused on promoting green innovations as a key element in meeting the challenges of climate change. Our desire is guided by the understanding that we all have to continue to change our behaviour to treat and manage our natural assets on the basis of sustainability and intergenerational equity.

It was a welcome coincidence, when Kluwer Law International inquired about an update of our previous publication from 2003 in its International Environmental Law & Policy Series, and it was quickly agreed on the content and scope of such a new edition.

After several years of consideration, discussion, coordinating and writing it is not accidental that this publication on 'Green Innovation and IPR Management' has been finalized in 2012. This year the United Nations Conference on Sustainable Development (Rio+20) took place and identified 'Science and Technology for Sustainable Development' as one of the priority issues for Rio+20.²

The Outcome Document of Rio+20 'The Future We Want' includes as paragraph 272:

We recognize the importance of strengthened national, scientific and technological capacities for sustainable development. This can help countries, especially

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1. Message by the Director of the World Intellectual Property Organization at the World Intellectual Property Day on 26 April 2009 http://www.wipo.int/ip-outreach/en/ipday/2009/dg_message_09.html (12 May 2012).
 2. UNCSD Secretariat, Rio 2012 Issues Briefs, No. 12, January 2012, p. 1 at <http://www.uncsd.org/rio20/content/documents/278Rio2012%20Issues%20brief%2012%20Science%20and%20Technology%20final.pdf> (12 May 2012).

developing countries, to develop their own innovative solutions, scientific research and new, environmentally sound technologies, with the support of the international community.³

It underlines the importance of green innovations for sustainable development.

Even though the book 'Green Innovations and IPR Management' is edited in the understanding of the mentioned above, the publication is primarily intended to sensitize inventors and innovators as well as lawyers, decision-makers and government officials regarding present mechanisms to manage and to share intellectual property rights in the context of green innovations.

Bremen, September 2012

Andree Kirchner

Iris Kirchner-Freis

3. UN Doc. A/66/L.56, 24 July 2012, Para. 272.

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