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OPEN SOURCE SOFTWARE AND INTELLECTUAL PROPERTY RIGHTS

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To my grandfather, Sh. B.R. Vasudeva
my spirited guide and my guiding spirit

Preface

This book is largely based on the thesis I wrote for the degree of Ph.D. (Doctor of Philosophy) in Law from the Indian Law Institute under the mentoring of Dr S.S. Jaswal, Dr Furqan Ahmad, Dr Jyoti Dogra Sood and Dr D.S. Sengar. This book however, marks a milestone of an endeavour that took root during the studies for my LL.B. (Bachelor of Laws) (Honours) and subsequent PG Diploma in Cyber Laws.

During my LL.M. (Master of Laws) studies at The George Washington University Law School, as a research assistant with the University's Creative and Innovative Economy Center, under the tutelage of Dr Michael P. Ryan, my interest in this field took shape, when I developed an extensive bibliography on Open Innovation in Developed and Developing Countries.

The comparative analysis of this book was broadened to encompass the European Union, when I was a doctoral fellow with the Max-Planck-Institute for Intellectual Property and Competition Law under the guidance of Dr Silke von Lewinski. Thereafter, the concluding chapters of this book were structured when I was an Invited Researcher with the Japan Patent Office and Institute of Intellectual Property (IIP), Tokyo, Japan. I received considerable academic support at IIP from Mr Y. Omori, Mr H. Amano, Mr T. Iwai, and Mr T. Uchida. My work at IIP culminated into a report (Multi-Licensing Model (Open and Closed Source) and Software Protection: Revisiting The Proposed Sui Generis Software Protection Models published under the Industrial Property Research Promotion Project (2011)) which forms the basis of an important facet of this book namely the sui generis analysis and proposal for software protection. It is pertinent to clarify that this research is internationally applicable and there are no limitations as to the jurisdictions covered. Conversely, it must be stressed that given the nature of internet, the

licenses are both dependent and independent of possibly differing national legal interpretations.

In my endeavour, I was guided by several informal interviews and discussions with colleagues, academicians and practitioners. The discussions and critiques of Dr Christof Karl, Partner, Bardehle Pagenberg, Munich; Ms. Sofia Filgueiras, LL.M. Eur. (Munich), Max-Planck-Institute; and Mr Richard Stern, Of Counsel to Kellogg Huber Hansen Todd Evans & Figel, Washington, DC were invaluable in structuring the multi-dimensional approach of this book. Feedback received through conference presentations and journal articles have also been incorporated, specifically, *A Relook at Sui Generis Software Protection Through the Prism of Multi-Licensing*, 16 (1-2) Journal of World Intellectual Property 87–103 (John Wiley & Sons, March 2013) and *Open Source: An Innovation Paradigm*, Medico-Legal Update (2012).

My association with law firms in U.S.A, and in the Chambers of Mr Gopal Subramanium, Senior Advocate and former Solicitor General of India enabled me to infuse a practice oriented perspective to this book. Also, my research activities with The Supreme Court of India and Law Commission of India facilitated me to instil a facet focusing on governments and legislations.

This research does not endorse any one licensing model, or approach towards software development but rather seeks, in an academically rigorous and objective manner, to attempt to clarify some facets of this discipline. This books seeks to address the law in the field of open source software, specifically in the context of intellectual property. Correspondingly thereafter, this book embarks on an exploration of the entire field of intellectual property protection of software through the prism of open source and also submits a model software law. Intellectual property rights are the primary focus of this book because they form the biggest and most revolutionary section of the legal paradigm that is open source software. Besides the legal aspect, this book also reflects a philosophical, business, and technical orientation, to echo the various facets of software in our life. Given the dimensions and dynamics of open innovation, this research may well continue in the future.

Foreword

Michael P. Ryan, PhD
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Professor Douglass North co-won the Nobel Prize in Economic Science for teaching that institutions – "the rules of the road," as he puts it – explain economic performance across time and space. Institutions of currency and credit, contract, and property rights provide incentives for industrious efforts and facilitate market-based transactions among economic actors. Societies, he argues, that establish effective and efficient institutions grow faster; societies that fail to establish good institutions languish. He points out that economic history is riddled by the infrequency of effective institutions, so that economic growth and the resulting opportunities for social progress are uncommon.

In particular, Professor North explains that real property rights enabled investments into agricultural production to yield large increases in food supplies. When real property rights and the other institutions of the pre-modern economy were combined with physical infrastructures for the movement of agricultural commodities, then food markets arose for the sharing of surplus production. Human malnourishment declined; populations expanded. He further explains that intellectual property rights, especially patent rights, enabled investments into industrial innovations to yield large increases in the variety of manufactured products and large improvements in the processes by which manufactured products were made. When intellectual property rights and the other institutions of the modern economy were combined with physical infrastructures for the movement of manufactures,

then industrial markets arose to integrate peoples for trade through comparative advantages. Industrial innovations improved human productivities; improving human productivities enlivened social progress. Institutions, he says, explain our revolutions in agriculture and industry.

Industrial innovations have transformed economic and social life by enabling capabilities. Industrial innovations carried out in societies with good institutions enable new capabilities to know more, organize better, and promote social goods. Advances in computing were among the most important industrial innovations; advances in computing drive post-industrial economic and social progress. Advances in industrial era computing owed to innovations in the products and processes of the manufacture of computing hardware; advances in post-industrial era computing owe to innovations in the products and processes of the manufacture of computing hardware and to innovations in the products and processes of the creation of computing software.

Software animates the physical forms of computing for myriad tasks of communication and control in post-industrial society – from genetic decoding to computer-aided design to robotic manufacture to smart grids to smart phones to cloud computing to electronic commerce. Software advances spring not from vacuums but from societies with good institutions. Institutions provide the "rules of the road" for software creators. Institutions may provide rules of the road – the Information Superhighway? – that encourage or discourage software innovations to be introduced into the marketplaces of communication and control.

Mr Vasudeva studies in this monograph the institutions of intellectual property rights for open source software. He explains that two paradigms of software creation co-exist, a proprietary paradigm and an open source paradigm. He explains that both software creation paradigms rest their legal legitimacies in the marketplaces on intellectual property rights. The institutions of intellectual property rights – trade secrets, patents, copyrights, and trademarks – all provide rules of the road for software creators. He focuses attention on how the institutions of trade secrets, patents, copyrights, and trademarks influence open source software developments. He contends that the details of the institutions matter and he provides detailed investigations of how the four differing institutions engage open source software development.

Mr Vasudeva follows the open source software "movement" when conceptualizing open source software development as collectively-produced products. He argues that the license provides the institutional underpinning for the successive and progressive production under the open source software paradigm. He thereby carries out detailed investigations of the commonly-used open source software license models. He assesses how these license models work and how they interact with the institutions of intellectual property rights. Mr Vasudeva argues that articulation, development, and growing use of these open source software license models may be leading as

a matter of governance to international harmonization of intellectual property rights in a manner that supplements international diplomatic and national policy-making processes.

Mr Vasudeva has carried out a thorough reading of the extensive legal commentary regarding open source software and intellectual property rights. I initiated those labours when I recruited him, when I was leading a centre focused on emerging economies and he was a Master of Law student George Washington University Law School, to study and summarize the scholarship. Mr Vasudeva, after completing his studies, continued these efforts at the Max Planck Institute for Intellectual Property and Competition, and later at the Japanese Patent Office. It is the benefit of studies carried out in the United States, Europe and Japan, as well as from perspective of an advocate working in the chamber of the former Solicitor General of India that enable Mr Vasudeva to bring to his monograph a special global perspective.

Mr Vasudeva concludes that the open source software paradigm will continue to co-exist with the proprietary software development paradigm. He argues that the open source paradigm complements, not supplants, the proprietary model. However, he argues for sui generis intellectual property rights laws to best facilitate open source software development. His arguments for intellectual property rights law reforms with respect to software merit careful study and reflection. He contends that open source software development provides people in developing countries with special opportunities to participate in local and global product creation. Mr Vasudeva argues for continuing harmonization of the intellectual property rights institutions globally. With good institutions, he sees a bright future for open source software development.

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Chapter 1
Introduction

Software programming has always been susceptible to the de facto technological milieu. However, the case of de facto standards is that they find favour only uptil the time they are the best available solution. Similar has been the occurrence in context, which has initiated a shift in the de facto control of software programming from proprietary to open source software development structures. Hence, proper safeguards are required to manage this novel software development model to ensure its efficacy.

Traditional interpretation of intellectual property structures to suit business concerns nurtured the proprietary model of software development, which was the veritable apotheosis for over two decades. However, changing times and understanding heralded in increasing concerted disapproval and dissent from all involved stakeholders regarding inefficiency and the contracting public domain which in the natural progression of affairs should actually have been expanding. This laid the foundation for a sort of 'return to the roots' movement under the flagship of the open source software movement.

The legal legitimacy of open source and proprietary software is derived from the owner's intellectual property rights. However, the primary difference between the two development structures emerges from their treatment of rights and obligations attached to the software. It is the licenses that transcend the academic discipline into practice by articulating a governance continuum. Open source software licenses invert the traditional licensing concepts established by proprietary structures of restricted usage of intellectual property rights to grant rights complementing propagation of open source philosophy. This in turn yields considerably different consequences. The existing legal jurisprudence in the intellectual property sphere as regards