Foreword by R. A. Mashelkar

Intellectual property (IP) is no longer seen as a self-contained domain in which specialists alone work and dwell. It is viewed as an integral part of innovation-driven socio-economic development across the globe and is increasingly becoming an effective policy instrument with respect to a range of technological, socio-economic, and political concerns. This *Handbook* of best practices in intellectual property management, with its novel and useful *Executive Guide* is, therefore, an extraordinary contribution that has arrived at precisely the right time.

The issues of generation, valuation, protection, and valorization of intellectual property are growing in complexity. There is increasing demand for new forms of IP protection. Economies are changing, with a new knowledge-based economy replacing "bricks-and-mortar" based economies. Scientific knowledge is growing exponentially. A new "geography of science" exists with innovative developing countries, such as India, China, and Brazil, having emerged as major contributors to science and technology. Policy-makers, researchers, and entrepreneurs have begun to appreciate the vast resource of traditional knowledge in the developing world and to recognize the complex issues connected with intellectual property therein. Not long ago, IP experts had only to deal with inanimate objects. Today, IP involving plants and animals, including humans, raises new complex issues and perplexing questions. Therefore, a book dealing with guidance on these issues with authority and clarity was sorely needed. The timely issuance of the Handbook and Executive Guide fulfills that need. The book is authoritative, comprising contributions by many of the leading practitioners and thought leaders in the field of IP management. The book has clarity. Its best practices and strategies have been explained in a way that is very easy to assimilate.

Books on intellectual property that were published in the past, while in many ways valuable, dealt only with enterprises and institutions in developed countries. This *Handbook* represents the first major effort to deal with issues of concern within the developing world. Furthermore, the role of public sector research institutions in fulfilling the socio-economic goals and objectives of developing nations, by contributing immensely to the public good as well as to the private good, had never before been written about extensively. This *Handbook* fills this void admirably.

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In the past, issues of emerging global innovation networks related only to North–North partnerships. But today North–South partnerships as well as South–South partnerships are emerging. As "technonationalism" finds a new equilibrium with "technoglobalism," IP management issues are becoming ever more complex. New forms of knowledge in the private domain as well as the public domain are being created. It is no longer Linux versus Windows—it is Linux with Windows! In general, how do we create a new nexus between the public and the private? The *Handbook* has taken up this new challenge head-on.

Drafting, interpreting, and analyzing the techno-legal and business information contained in IP documents requires specialized skills. Monitoring, through online databases, the wealth of information in patents and other forms of intellectual property in order to ward off threats to national IP portfolios is becoming critical. Analyzing such information, for market intelligence, to identify strategic alliances, and to exploit potential niche areas for the innovative use of intellectual property will, itself, give rise to new knowledge-based businesses. This *Handbook* is invaluable from this perspective, as well.

Today, start-up companies and spinouts reach beyond Stanford, M.I.T., Cambridge, and Oxford. Leadership in China reports that Chinese universities have set up several hundred high-tech start-ups. India is introducing a Bayh-Dole-type law for Indian universities and research institutions. In short, the phenomenon of wealth creation through the knowledge generated at universities is spreading across the world. The *Handbook* offers valuable guidance to university inventors and administrators with regard to licensing, negotiating agreements, technology transfer, dispute resolution, and so on.

One of the most fascinating sections presents institutional case studies, providing insights from Stanford, M.I.T., Cambridge, and other leading public sector research institutions. The case studies will be most revealing for institutions in emerging economies setting up their own technology transfer systems and wishing to emulate those universities.

When a patenting culture starts in an institution, issues of how to read and write patent applications, how to document inventions, as well as how to prepare laboratory notebooks and invention disclosures become crucial. In India, there was nothing to guide us when our own "patent literacy movement" began. We learned the hard way. How much easier and productive our work would have been had the *Handbook* and *Executive Guide* been available to us then!

The issues of IP management in low- and middle-income countries are vastly complex. In particular, lifesaving innovations in health and livelihood-generating innovations in agriculture directly affect those countries' socio-economic development. Special attention has been given in the *Handbook* to address these issues.

I do hope this *Handbook* will not only help in providing guiding principles and best practices in IP management, but will become a lighthouse that will show the way toward a more equitable and inclusive world. After all, making intellectual property work for the poor, whether it is owned by the public or by private entities, can be the only way to create an innovation-led inclusive growth movement.

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