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Preliminaries

1 Technology Transactions is part of an intellectual property (IP) Series published by the Faculty of Law of the Geneva University. It is the 11th volume of a publication launched in 2008. The latest brings together papers presented at a conference organized on occasion of the 2018 Intellectual Property Day. The contributions authored by experienced experts and practitioners - Marco M. Aleman, Christoph Spennemann, Mark Anderson, Philippe Gilliéron and Adrien Alberini - are reproduced in the book in their original English and French versions.

2 Technology transactions embrace a diversity of contractual relationships wherein the parties agree to share, under mutually agreed conditions, a technology owned by one of the parties as intellectual property rights (IPRs). The book deals with a range of transactions including patent assignments, licensing, research and joint development. The central purpose of this work is to offer an overview of perspectives on some of the thorniest questions facing technology agreements. A unifying thread of the five contributions is that, notwithstanding their economic relevance, technology transactions do not figure prominently in multilateral legal instruments and in the case of domestic law their treatment is far from being homogenous. The lack of harmonization is striking in an area that is transnational by nature. Licensing agreements generally cover several geographical areas.

3 The volume begins with a preface by Professor de Werra, who has devoted an important part of his academic work to these issues, underlining that an efficient and sound use of knowledge is one of the drivers of the globalized knowledge economy in which businesses, institutions and societies operate. He refers particularly to knowledge of a technical nature – often protected by intellectual property law as in the case of patents, trade secrets, copyright – which is transferred and disseminated in contractual transactions of a diversity of forms. Despite their frequency, technology agreements continue to raise multiple legal issues not only internationally, but also at the national level. According to Professor de Werra, there are many reasons for this: technology agreements are at the intersection of distinct legal disciplines (notably contracts, intellectual property, competition law). Moreover, their specific subject matter are intangible assets that by their very nature
evolve, a trait that gives particular dynamism to these agreements.

**Patent Transactions. Limited regulation in the multilateral legal framework and diverse legislation and practice at the country level**

4 The first chapter by Marco M. Aleman, senior official in WIPO, provides an overview of the role of patents in technology transactions with emphasis on the international legal framework and on the key issues that according to the author need to be borne in mind in contracts. Aleman focuses on assignments and licensing of patent rights. His main premise is that innovation serves as a key driver of modern economies and that a large number of enterprises focus their activities in developing technologies. For that reason, intellectual property rights (IPRs) play an essential role in supporting these economic undertakings by protecting the intangible fruits of this work. IPRs support entrepreneurs to better manage their investments providing certain control over their use and diffusion.

5 Patent transactions do not refer to a single type of contract, but rather to an assortment of arrangements that serve a range of purposes, from achieving access to technology, jointly developing new ones, or building competitive positions. The author asserts that it would be a challenge to create an exhaustive set of international rules capable to take into account this diversity of transactions and their motivations. However, there are certain areas where parties may benefit from a set of default rules particularly to fill gaps where agreements are silent on a precise issue. A set of best practices or default rules could also lay the groundwork for further efforts of harmonization.

6 Aleman expands on the role played by the World Intellectual Property Organization (WIPO) as the global forum for intellectual property services, policy, information and cooperation. He observes that despite the extensive network of legal arrangements administered by WIPO (26 treaties), provisions dealing directly or indirectly with patent transactions are very rare. In the Paris Convention (1883), which is the backbone of the industrial property multilateral legal system, only a single provision deals with transactions, namely Article 6quarter on the assignment of marks.

7 An interesting feature in this chapter is the comparative law analysis and the specific examples of how different legal regimes deal with matters that relate to the assignment of patent rights. At the same time, the author underlines that the variations in patent regimes may present challenges for those involved in trans-border transactions that could even impair an effective transfer of technology. The author mentions the mixture of approaches taken by domestic law on who owns a patent in the case of inventions originated in the course of an employment relationship.

8 In his concluding remarks, Aleman stresses the significant variations in the legal framework that governs patent transactions across countries. For cross border transactions, understanding the differences can be critical in determining if the parties can actually provide the rights they intend to assign or licence and whether the transaction will have any legal effect. In this context there have been limited efforts to establish an international legal framework to guide such transactions. The author asks rhetorically if international harmonization is the answer: Is there a need for such default rules?

**International Technology Transactions from a Development Perspective**

9 Christoph Spennemann, senior official in UNCTAD, deals in his contribution with a development perspective of international technology transactions, namely the constraints faced by developing countries in negotiating favourable technology deals. He emphasizes the role played by technology in developing countries' efforts to transition from commodity dependency and cheap labour to a knowledge-based economy. The chapter discusses the important role transactions with foreign investors play for the creation of technological capacity in importing countries. The author calls attention to the fact that technology transactions from this perspective are not limited to formal per se intellectual property agreements, but also comprise arrangements to transfer knowledge and know how

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2 For example, in both Japan and the United States patents are owned, by default, by the inventors. Employers who wish to own the rights to inventions created during employment must so provide by contract. Swiss law follows a similar approach. In contrast, in other countries, such as Brazil and Colombia, inventions made during the course of employment or under the scope of a service contract are, unless otherwise agreed, the property of the employer. The law in different countries also differs in terms of requirements to record patent licences. In some developing countries agreements need to be recorded to be legally enforced. This is not the case in the USA and Switzerland.
that might eventually involve one specific category of intellectual property.

10 In the view of Spennemann, informal means of transferring technologies are as relevant as formal means, because they can establish better grounds for formal means such as a licensing agreement. Informal means often play a key role in creating domestic “absorption” capacity, i.e. the ability of domestic stakeholders to understand and learn foreign technologies. Without such absorption capacity, attempts to successfully transfer technology are likely to fail. The creation of absorption capacity on the receiving end is thus the first step in the technology transfer process.

11 He backs his conclusions by a number of interesting case studies carried out by UNCTAD in the recent past particularly in Argentina, Colombia, Ethiopia and Uganda. One positive factor is the support and role played by public institutions to enhance the promising aspects of such transactions. In the most successful cases, factors such as in-built research and development capacity in the recipient firm plays a key role. The case study on Argentina demonstrates, for example, the importance of endogenous technological capacity of the recipient firm to attract foreign investors under mutual beneficial licensing terms.

International IP transactions: arguments for developing a UN standard

12 The central message in Mark Anderson’s chapter is the need to develop a set of international standards dealing with intellectual property transactions, which could be applicable to different categories of IPRs and to different types of transactions, including assignments and licences. He argues that although IP laws are mostly national, international treaties harmonise IP laws in different ways, whether through:

- a single application route (as in the case of the Patent Cooperation Treaty or the European Patent Convention);
- a single, multi-country form of protection (as in the case of pan-EU trademarks, registered designs and unregistered design rights); or
- mutual recognition of national IP (as in the case of copyright under the Berne Convention).

13 The main focus of national IP laws and of international measures on IP has been on areas of subsistence, ownership, validity, infringement and enforcement. By contrast, the transactional aspects of IPRs – how do you assign, license or grant a security interest over rights, and what terms apply to such a transaction - have historically received little attention, both at the national and international level.

14 Anderson underlines that domestic laws on IP transactions are patchy in their coverage, inconsistent between IP categories, and unpredictable between countries. In many economies there is no coherent corresponding set of laws, and it may be necessary to draw on general contract law principles, or principles from traditional property law, to fill in the gaps, sometimes with unexpected consequences. As a result, litigating IP agreements is a burdensome process with an uncertain outcome. This is detrimental to an efficient system of international trade.

15 Anderson suggests that gaps in transactional IP laws can be addressed through detailed terms in licence agreements and other IP agreements. However, many of the agreement templates that are used for IP transactions are of poor quality and are not entirely appropriate or fully understood by the parties using them. Given the international nature of many transactions, it would be sensible to develop new standards to govern them at the international level, in areas such as the interpretation and enforcement of IP agreements, and the terms that should be implied into them. He provides the example of the United Nations (UN) Convention on the International Sale of Goods as a template for the methodology of developing such standards and for the types of issues that may need to be addressed.

IT Agreements – from software to cloud services

16 Philippe Gilliéron, an information technology agreements (ITA) practitioner, provides a detailed overview of ITA in the current setting. As the author states, ITA are a world of their own. It is a generic reference that encompasses several types of agreements all related to the exploitation and use of digital resources.

17 Gilliéron highlights the specificities of each category of agreement and their complexities in a new area of law where according to the author there is absence of expertise and proper understanding of the IT industry for most legal professionals. These factors add greater risks to consumers. According to the specialist, if not properly handled, IT agreements do indeed bear significant legal risks that may
easily put business sustainability at stake. In his chapter the author provides insights into this world, pointing out salient features to bear in mind when negotiating this type of agreements, particularly when intellectual property rights are involved. He also cautions that this ecosystem changes quickly, and so does the IT environment which is at the core of this evolution. He foresees that not very far in time we will see new categories of ITA addressing emerging topics such as virtualization, blockchain, artificial intelligence or machine learning to name a few.

18 The author provides further insights into the negotiation of these agreements underlining that bilateral agreements between one given provider and a given customer do not raise many concerns from a structural standpoint, however, agreements that may be contracted by a group of companies, either at the level of the provider, the customer, or both, are different. Negotiating ITA at the level of a group can serve several purposes: (i) delineating the terms of a framework agreement at the central level to ensure that conditions will align with the group’s policies and compliance requirements avoiding inconsistencies or market distortions; (ii) improving commercial terms at the central level to achieve better pricing as well as exercising pricing control; (iii) aiming at avoiding inconsistency in having multiple providers of the same product or service to the affiliates by ensuring that preferred providers will be chosen as a vehicle to be retained at market level; thus, ensuring better control and pricing through volume.

19 Gilliéron points out that ITA must always bear in mind potential competition law issues, which leads in to the last chapter of the book.

Accords de technologie et droit de la concurrence: de l’approche plus économique à la saisie par l’abus de position dominante

20 The final chapter by Adrien Alberini deals precisely with competition issues with particular emphasis on abuses of a dominant position.

21 According to the author, his main purpose is to illustrate the close relationship between competition and intellectual property law. In European law, technology agreements are mainly governed by the Treaty on the Functioning of the European Union (TFEU). Accordingly, agreements which have as their object or effect the prevention, restriction or distortion of competition within the internal market, are automatically void. The parties to such an agreement may, however, benefit from an individual exemption if the agreement produces pro-competitive effects.

22 An interesting feature of this chapter is the analysis of recent developments in areas such the application of technical standards and the increasing role being played in recent years by competition law with respect to technology agreements. “Put differently, one can venture to assert that intellectual property, at least when it is contractually exploited, is always increasingly ‘captured’ by competition law.” European competition law plays a predominant role as a model (or legal benchmark) when there is no specific regulation at national level, as is the case in Switzerland where the Competition Authority has chosen not to adopt rules applicable specifically to technology agreements.

23 What appears evident in the evolution of European competition law is the emphasis given to economic rather than legal considerations. Closing gaps in a way with American law, the rule of reason and a case by case approach appear to emerge. This applies in particular to issues such as pricing, quantity and territoriality clauses. More specifically with regard to technology agreements, attention is paid to agreements which, disguised as technological cooperation, are essentially intended to allow the parties to introduce market distortions as well as to clauses which indirectly have as their object or effect a hard restriction of competition.

Conclusions

24 This collection of articles presents a stimulating synopsis of recent trends and developments in technology agreements and the role played particularly by IP and competition law. A central common thread is the realization that multilateral principles and rules constitute a major legal deficit in this important area so closely related to the global knowledge economy. The latest generation of multilateral agreements, such as TRIPS, fails adequately to provide specific standards and principles that could facilitate business and the diffusion and transfer of technology. On the other hand, TRIPS is one international treaty that does acknowledge licensing and assignment of patents as an important component of patent holder rights. The Agreement is also one of the first to provide general principles on the control of anti-competitive practices in transfer of technology transactions. In this context, as described in one of the chapters of the book, the international community failed to reach agreement on an international code of conduct on transfer of technology, an initiative promoted by a group of developing countries in the 1980s.
A great merit of this publication is precisely to revisit the challenges of agreeing at the multilateral level on principles and standards to promote security and a level playing field on rules on technology cooperation and diffusion. The editor should be congratulated for his commitment to this area of law, essential in our global knowledge economy.

Naturally, the book being the result of edited transcripts of presentations made at the conference held in Geneva in 2018 has some deficits and oversights, but overall it is a very useful and practical source to enlighten further work and research on future multilateral undertakings in setting principles and standards on technology transactions.

The substantive coverage of the book is broad and rich, expanding from a detailed analysis of patents as an important component of technology transactions to case studies on technology transactions and their impact on developing countries. Moreover, it includes relevant analysis on the gap in the multilateral system, contrary to the range of treaties governing protection of IPRs and facilitation for extending their protection in third countries. A third feature of the book is the detailed examination of new forms of agreements focusing on information technology in the case of software and cloud deals. Finally, the book concludes with a very helpful overview of the relationship between technology agreements and competition law particularly from a European law perspective.

Bringing to this publication practitioners, academics and experienced staff from international institutions working in this field is without doubt an important asset of the book.