

All these data point to highly profitable “markets for technology”,<sup>18</sup> where innovations are traded, thereby opening the way for downstream dissemination of IP. Accordingly, the registered rising trends both in patent registrations and licensing activities are seen as positive indicators of innovative growth, representing driving factors of economic progress. However, the potential for such technology markets is still not fully utilized, since in industrial sectors characterized by particularly dense and scattered IP rights, resulting in “patent thickets”, inefficiencies may arise, imposing additional costs and drags on downstream product developments, thereby obstructing the way for innovation.<sup>19</sup>

Within this perspective, this contribution is dedicated to exploring strategic ways in which the encountered costs may be reduced by facilitating access to IP rights, so that markets for technologies can function more efficiently and their actual potential can be unveiled. In this respect, this research is going to focus on voluntary business schemes, operating through free market mechanisms, rather than mandatory regulatory or legal approaches, such as compulsory licensing or research exemptions. In this context, the models considered are going to encompass multiparty IP licensing strategies, such as patent pools and clearinghouses, imprinted to a collaborative, but still pragmatic spirit.

## II. The Solution Offered by Collaborative IP Mechanisms: A Brief Overview

### 1. Patent Pools

Faced with this situation which is occurring ever more often today, “prevention” is certainly better than “cure”: in this sense, entering a patent pooling agreement – where competitors, i.e. potential infringers, become contributors, i.e. business partners – at an earlier stage would prevent the “collateral effects” of a patent thicket. Indeed, the terms governing a patent pooling licensing agreement are typically beneficial to all participants, providing for free or low-cost access to all pooled technologies and a fair distribution of the third parties’ incoming licensing fees. In the end, right owners can win respective blocking positions by bringing their technologies together, while granting each other access, thereby overcoming the impasse of these

per, January 2007, also available at:

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- 18 Arora A. *et al.*, “Licensing the Market for Technology”, *Journal of Economic Behavior and Organization*, 2003, vol. 52, p. 277 *et seq.*
- 19 For an economic study of patent pools and intellectual property clearinghouses, as systems for promoting efficient access to licensable IP and thereby enhancing a market for technology, see: Aoki R., “Promoting Access to Intellectual Property: Patent Pools, Copyright Collectives, and Clearinghouses”, *R&D Management*, March 2008, vol. 38, issue 2, p. 189 *et seq.*

“blocking patents”, as a vital step for maintaining and fostering innovation, which ultimately represents the fuel of our economical and social wealth.

The phenomenon of “pooling” multiple technologies together has accordingly become a common practice of business and has attracted increased - though not yet full - attention, also for its legal implications, as the omnipresent antitrust scrutiny warns.<sup>20</sup> These kinds of licensing agreements gave birth to those relatively new, above-mentioned entities, known as “Patent Pools”, which are gradually gaining recognition – and cautious acceptance – also by public authorities, as proven by the significant recent legislative production in this field, of which we will give due account.

However, in order for these premises to provide “the big picture”, it is due to mention that patent pools are not the only kind of collaborative IP mechanisms in place to ensure patent access, even if at present they are certainly the most visible and constitute the central point of this contribution, in consideration of the great economic and legal implications that those types of licensing agreements usually engender.

## 2. Clearinghouses

Clearinghouses are basically managing entities based on the collecting societies’ paradigm, as widely established for copyrights, which have recently gained more and more ground also within the patent domain. Specifically, they operate as intermediate bodies between different patent holders and interested third parties to promote future negotiations, according to the scope of their constitutional mandate more or less proactively. In fact, as will be further outlined,<sup>21</sup> the simplest “information clearinghouse” model has already been enhanced on the premises of facilitating access and exchange of relevant data concerning specifically targeted technological sectors, ultimately in order to foster a more direct collaboration among the concerned patent holders. Overall, all the collaborative IP mechanisms that are under consideration here share the common aim of facilitating third parties’ access to use a given technology, which once it is patented typically happens by way of licensing. In fact, while on the one hand it is undisputed that a patent is mainly a “negative” right, i.e. the right to exclude others from making, using and exploiting the invention, on the other hand it is believed that the effective value of a patent relies on its “positive” content, i.e. its ability to be employed in the marketplace by competitive

20 For an outlook on patent pools’ antitrust issues, see i.a.: Ullrich H., “Patentgemeinschaften”, In: Fuchs, A. et al. ,Wirtschafts- und Privatrecht im Spannungsfeld von Privatautonomie, Wettbewerb und Regulierung - Festschrift für Ulrich Immenga zum 70. Geburtstag. München, 2004, p. 403 *et seq.*

21 For a more detailed overview on clearinghouses, see further: Part V of this contribution on “The Alternative Approach of Clearinghouses: Distinctive Features and Applications in Biotechnology”.

operators. Indeed, by allocating his exclusive rights, the patent owner can cash in his own IP by granting licenses on convenient terms.

A smart licensing strategy represents in fact a sustainable way to extract value from patents and is often a more profitable alternative than exploiting the invention alone, since by way of licensing a much wider public can be targeted; besides, that may well facilitate the technology's effective implementation also outside the patentor's main area of activity, where the latter would otherwise not be able to invest relying on his own resources alone.

Therefore, by granting each other licenses, the right holders are likely to speed up technology adoption both by effectively reducing uncertainties regarding respective rights allocation and by avoiding the costly and time-consuming way of litigation thereby preventing even more costly damages to business relationships and reputation often arising from asserting one's patent directly. Indeed, these considerations constitute the basis for the establishment of patent pools, on which, due to the compelling relevance assumed by this phenomenon, we will mainly concentrate our analysis in the first place.

## **B. Patent Pools as Business Models and Comparison with Alternative Sharing Solutions**

Patent pools could be placed at halfway, quite as a “hybrid”, between arm's length contracting and full integration, i.e. joint ventures, which have been at the centre of antitrust censorship and calls for a more extensive overall regulation, beyond otherwise fragmental and non-exhaustive approaches, for the benefit of legal certainty and eventually economic efficiency.<sup>22</sup> In fact, patent pools might well represent a viable solution to redress the problem, generally outlined above, of overlapping intellectual property rights, i.e. the so-called “patent thickets”, where inventors find it difficult to commercialise new innovations without stepping into each others' feet.

Indeed, the choice of adopting a patent pool model has not only proven to be a viable one, but also to constitute an extremely successful business: a quite recent estimate suggests that in the year 2001 in the United States the revenues generated from sales of devices based in whole or in part on patent pool technologies amounted at least to 100 billion US Dollars.<sup>23</sup>

22 See, in this respect, Lerner J., Strojwas M., Tirole J., “The Design of Patent Pools: The Determinants of Licensing Rules”, November 2005, p. 1 *et seq.*, available at: <http://www.people.hbs.edu/jlerner/PatPoolEmpiricalPaper.pdf>

23 Clarkson G., “Objective Identification of Patent Thickets: A Network Analytic Approach”, 2003, p. 7 *et seq.*, available at: <http://stiet.si.umich.edu/researchseminar/Fall%202004/Patent%20Thickets%20v3.9.pdf>