Part I. Introduction

Technical standards form an integral part of any modern, network-based industry. Standards allow for individual devices to interoperate seamlessly with each other, they build consumer confidence that networks will work properly and they are thus a major driver of growth of network markets and of the economy in general. There are three paths to standardisation: legal standardisation set by state regulation; *de facto* standardisation, which is the outcome of fierce competition between competing standards in what could be called a 'standardisation race'; and formal coordinated standards-setting.

The most efficient form of standardisation is the privately-coordinated standards-setting process. Formal coordinated standardisation is conducted under the auspices of standards-setting organizations ('SSOs'), that is private voluntary institutions incorporating the most meritorious technical solutions into agreed upon standards.[1] Contributors to the standard setting process are typically allowed to apply for and exploit patents reading on their particular technical contributions. The licensing revenue from standard-essential patents (SEPs) is a vital economic incentive for participation in the process.

However, the obvious importance of access to SEPs for the implementation of standards by downstream businesses might also leave scope to SEP-holders for opportunistic behaviour which may in turn have dire consequences for implementers, competitors and consumers. SEPs are by some estimates litigated five times more than their non-SEPs equivalents.[2] Some of this litigation has reached the headlines mainly in the context of

1 Industry participants delegate on technical matters through their technical experts representing them at SSOs working groups. See Gupta, *The Patent Policy Debate In The High-Tech World*, Journal of Competition Law and Economics 9(4) 847 (2013).

2 Bekkers et al, *Selected Quantitative Studies of Patents in Standards*, (Tokyo Hitotsubashi University, Institute of Innovation Research, PIE/CIS Working Paper 626, 2014, at 68). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2457064.

the 'smartphone wars', though litigation in other industries is no less frequent.[3]

The litigation practices of several stakeholders, including aggressive pursuit of injunctions and sales bans, has posed competition authorities a series of complex issues involving the role of antitrust enforcement in the context of standards-setting. Through a long process of trial-and-error a common pattern has emerged in the enforcement activities of antitrust authorities in two of the world's most important jurisdictions, the US and the EU. Competition law had so far a residual role in the context of formal coordinated standardisation; in most cases it fills in the gaps where other legal institutional frameworks, such as patent law and contract law, fail to produce pro-competitive outcomes.

More specifically, the US antitrust agencies benefit from a flexible legal system which has built-in checks and balances on alleged anticompetitive enforcement of SEPs. Long-standing equity traditions of providing for injunctions as a discretionary remedy under specific conditions, reminded by the Supreme Court in its critical *eBay* 2006 ruling,[4] have for the most part diffused the threat of anticompetitive effects by means of abusive SEP litigation.[5] The EU Commission, on the other hand, faced with inconsistent rulings by national courts, and in particular with German case law allowing for more or less automatic granting of injunctive relief in cases of SEPs infringement, played a much more active role.

However, it will be argued that antitrust enforcement against abusive assertion and litigation of SEPs has so far demonstrated a too narrow a focus on the voluntary FRAND commitment. This formalism might leave open an important loophole in cases where SEP holders have not made a FRAND commitment themselves. Two scenarios, illustrating the potentially harmful effects of this over-reliance on the FRAND commitment, are the ownership and subsequent enforcement of SEPs by patent assertion entities (PAEs) and privateers. An effects-based approach provides a more

3 Ibid, at 71.

4 *EBay Inc. v. MercExchange, L.L.C.,* 126 S. Ct. 1837 (2006).

5 In the context of smartphone SEPs litigation, for instance, there is to date not a single ruling granting injunctive relief in case of infringement. See Gupta and Snyder, *Smart Phone Litigation and Standard Essential Patents*, (Hoover Institution Working Group on Intellectual Property, Innovation, and Prosperity, Stanford University, Working Paper Series No. 14006, 2014). Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2492331.

encompassing framework for assessing abuses related to SEPs assertion, thus increasing legal certainty and guaranteeing the effective operation of the formal standard setting process.

The structure of the present thesis will be the following: part II includes a review of the standard setting process, the conditions for its competitive performance and the most significant threats to such performance prior- and post-standard-adoption; in part III the role of antitrust enforcement in the US will be discussed; in part IV the focus will move on the role of EU competition law against abuses in the enforcement of SEPs; in part V two scenarios of SEP ownership and enforcement will be examined, namely PAEs and privateers, as well as their implications for antitrust analysis; finally, part VI will summarize the conclusions of the analyses of the previous parts.