

of the standard. Therefore, as discussed above, the potential licensee, who wishes to manufacture and sell standard-compliant products, must obtain a license for each of the patents included into the standard. Accordingly, these patents do not constitute a separate product market, since they are considered complements, not substitutes.⁸⁴ As stated by *Anderman* and *Kallaugher*, it is obvious that the existence of non-substitutable complements has profound implications on the market definition.

In several cases where the product assessed has been rather complex, the European Commission has used its discretion to define markets narrowly, which in turn also makes it easier to establish dominance.⁸⁵ For example, in the *Hilti* case,⁸⁶ the European Commission decided that the relevant market did not include the entire wall construction market, since separate markets for nail guns, nails, and patented cartridge strips were deemed to exist.

Existing case law on intellectual property rights and competition law shows that the European Commission's practice of defining markets narrowly is not targeted solely at giant IPR owners. As argued by *Etro*, the European Commission's practice can be seen as part of a wider strategy aimed at enabling the Commission to regulate essential infrastructures, which are dependent on IPRs or so-called "lock-ins" in after markets.⁸⁷ As shown by the European Commission's actions in the *Microsoft* case, there is arguably a legitimate desire and need to use Article 102 TFEU to supervise effective competition in the information technology markets.

3.2 Dominance in Technology Markets

In some cases, the ownership of intellectual property rights may lead to dominance. In the context of standards, the key question is whether the holding of a patent portfolio or even only a single patent may amount to the holder being deemed to possess a dominant position enabling him to impede competition to an appreciable extent on the relevant market.

84 Supra note Steven D. Anderman & John Kallaugher, p.156-157.

85 This can also be seen in the recent *AstraZeneca* case dealing with the pharmaceutical industry, Case COMP/A.37.507.F3, *Generic/AstraZeneca*, 15th June 2005, IP/05/737, on appeal Case T-321/05, pending judgment.

86 Case *Hilti v Commission* [1994] ECR I-667.

87 Supra note Federico Etro, p.241-240.

In the *Magill*⁸⁸ case, the ECJ concluded that the mere ownership of an intellectual property right did not amount to dominance. However, the ECJ also held that IPR owners' exercise of an exclusive right might be a factor contributing to the presence of dominance and in exceptional circumstances amount to abusive dominance.⁸⁹ In this particular case, the ECJ found that the licensor had abused its dominant position by refusing to license the only source of information needed to publish a weekly television-listing magazine, and thereby preventing new products from emerging to an extent that the ECJ found was not objectively justifiable. Accordingly, to the extent that an intellectual property right are deemed to control the access to the relevant market it may be relevant as a factor indicating dominance.

When applying this doctrine, the holding of a patent may amount to dominant position within a standardized technology market, if the patent concerned encompasses mandatory features of an industry standard, as for example in the case of standard-essential patents, and the licensed technology contained in the respective standard happens to be considered to constitute an upstream market of its own.⁹⁰ In case law, so far great emphasis has been placed on the market share, but already in the *Hoffmann-La Roche* case, the ECJ recognized that the significance of market shares may vary from market to market and acknowledged the relevance of other factors.⁹¹ In the *AstraZeneca* case, the European Commission did in fact not rely on a market share analysis,⁹² but highlighted the importance of patent protection being used as a barrier to entry into the relevant market.⁹³

Under established case law, the lowest share at which an undertaking has been found to be dominant is 39.7 per cent.⁹⁴ It should, however, be noted, that as of yet the European Commission has not ruled out that market shares considerable below this point can amount to dominance.

88 Joined cases C-241/91P and C-242/91P, *Radio Telefis Eireann and others v Commission*, [1995] ECR I-743.

89 Joined cases C-241/91P and C-242/91P, *Radio Telefis Eireann and others v Commission*, [1995] ECR I-743, para.50.

90 Steven D. Anderman, *EC Competition Law and Intellectual Property Law: The Regulation of Innovation*, (Cambridge University Press 2nd ed. 2000) p.168.

91 Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, [1979] 3 CMLR. para.41.

92 Case COMP/A.37.507.F3, *Generic/AstraZeneca*, 15th June 2005, IP/05/737, paras 567-600.

93 Ibid. paras 517-540.

94 Case T-219/99 *British Airways v Commission* [2003] ECR II-5917, para.225.

In addition, it is essential to remember that it is still an open question under EC competition law, whether one single patent is enough to constitute dominant position, in particular if the patent in question only represents a small partition of a complex standard. Some guidance in this relation can be found from a decision issued by the Düsseldorf District Court in 2007. In said decision, the Düsseldorf District Court held that three percent of all essential patents of the GSM standard were enough to constitute dominant position in the respective market.⁹⁵ The Court also highlighted the risk of standard-essential patents being used as potential barriers to entry, since the usage of the GSM standard was indispensable for companies wishing to sell standard compliant cell phones.⁹⁶

As developments within the high technology industries have shown, the determination of market and dominance raises a number of complex issues, which the European Commission must assess with “*fresh eyes*” each time Article 102 TFEU is to be applied. Accordingly, the European Commission cannot automatically rely on findings of dominance made in previous cases. In particular, the Commission will have to take into account the particular facts of each individual case. For instance, the determination of the market share may be affected by the degree of product differentiation within the specific market at hand, and as the greater the extent of product differentiation is, the less reliable market share data alone will be.⁹⁷

Without any further discussion at this stage, it is adequate to conclude that if the holding of a patent can be considered to amount to the possession of a dominant position under the principles described above, the restrictions set out in Article 102 TFEU would seem to apply also to FRAND commitments.

3.3 Abusive Conducts in a Standard-setting Context

The concept of abuse under Article 102 TFEU has been widely interpreted. “*Abuse*” is generally subjected to a general test established by the ECJ in 1979 in the *Hoffmann-La Roche* case.⁹⁸ The general test focuses on so-called “*exclusion-*

95 Landgericht (LG) Düsseldorf, February 13 2007, Case 4a O 124/05-GPRS, BeckRS 2008, 07732.

96 Ibid.

97 See The Commission Guidelines on the assessment of significant market power under the regulatory framework for electronic communications, networks and services [2002] OJ C165/15, para. 30-32.

98 Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, [1979] 3 CMLR.