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, an 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.

ary abuse", *i.e.* conduct that is designed to exclude a competitor from the market. In a licensing context, the application of this general abuse test could cover a broad range of conducts. It also needs to be taken into account that, although the general test as such only includes exclusionary abuse, Article 102 TFEU does also prohibit exploitative abuse.[99] Consequently, even in the absence of exclusionary practices, the mere charging of "*exploitative*" prices may amount to abuse of a dominant position.[100] However, excessive licensing royalty rates and discriminative licensing conditions are generally discussed under the specific categories of exclusionary practices set forth in Article 102 (a) and (c) TFEU.

3.3.1 Excessive Pricing Under Article 102 (a) TFEU

Excessive and unfair pricing is one of the most controversial aspects of EC competition law and IPRs. It is of particular interest to note that the European Commission generally has not shown much interest in pricing issues, appearing to agree with the view that interference with high prices and profits *per se* constitute a disincentive to innovation and investment.[101] This view was particularly addressed in the European Commission's Competition Report for the year 1994:

"The Commission in its decision making practise does not normally control or condemn the high level of prices as such. Rather, it examines the behaviour of the dominant company designed to preserve its dominance, usually directed against competitors or new entrants who could normally bring about effective competition and the price level associated with it."[102]

It is also interesting to observe that the European Commission so far has not applied Article 102 (a) TFEU to the high technology industry. Even in the Commission's controversial decision concerning Microsoft's alleged abuse of market power, the Commission did not seek to apply former Article 82(a) EC. Many commentators, such as *Geradin* in a paper published in 2007, have argued that the *Microsoft* case demonstrated the Commission's unwillingness to control

99 Supra note *Hoffmann-La Roche v Commission*, para.91.

100 Rober O´Donoghue and Jorge Padilla, *The Law and Economics of Article 82EC,* (Hart Publishing 2006) Chapter 12.

101 See, however, press release IP/98/141, IP 98/707, IP (98) 1036 concerning the European Commission's price investigations into the mobile telephone services within the EC, where the Commission had identified 14 cases of suspected discrimination and high pricing, but closed its files as the prices in questions were reduced or actions were taken by the domestic regulators.

102 The European Commission's XXIVth Report on Competition,1994, part 207.

licensing royalty rates and find them exploitative, by preferring to deal with the matter as a question related to the prevention of exclusionary behaviour in markets characterized by high rents.[103] As *Geradin* argues, this attitude on the part of the Commission is not surprising, since at the end of the day, licensing is a matter of strategic business planning between competitors and influenced by several complex factors specific to the case at hand.

However, the case law of the European Commission and the Court of Justice of the European Union provides some degree of guidance on how claims of excessive royalties should be assessed under Article 102 TFEU. The first European FRAND case, even though the acronym FRAND is not used directly, is the *United Brands* case.[104] In this case, the European Commission imposed a fine on a dominant undertaking for applying dissimilar conditions to equivalent transactions. More importantly, the ECJ confirmed that the charging of excessive prices might violate Article 82 EC, the former Article 86 EC.

According to the ECJ, a price becomes "*excessive*" if it does not relate to the economic value of the product supplied.[105] The fairness of the price may be determined by on the basis of the costs of providing the product to customers by reference to the prices in comparable markets, or by reference to the intrinsic value of the product.[106] According to the test developed by the ECJ in the *United Brands* case*,* one should, in particular, assess the following two matters:

Whether the difference between the costs actually incurred and the price actually charged is "*excessive*"; and

In the affirmative, whether the price is deemed either unfair in itself or unfair when compared to the price of competitive products.

The ECJ's judgment in the *United Brands* did not, however, provide any further analysis on how to determine whether a price-cost difference is excessive, or on how to determine the notion of unfairness under the second part of the test. It is therefore difficult to apply the principles developed by the ECJ in the *United Brand*s in order to assess under which circumstances a royalty rate would consti-

103 Damien Geradin, *"Abusive Licensing in an IP Licensing Context: An EC Competition Law Analysis,"* European Competition Law, 2007, p.25.
104 Case 27/76 *United Brands v Commission* [1978] ECR 207.
105 Ibid, para.250.
106 Ibid. para.252.

tute an unfair license term.[107] This is, in particular, problematic since the terms "*excessive*" and "*unfair*" as such are vague and devoid of meaning in the absence of specific application or precise economic test.

Jones and *Sufrin* discuss this particular problem in their latest book, published in 2008. As identified by these authors, if the competition authorities are to look at a cost-price comparison in order to determine possible excessive pricing under the first part of the *United Brands* test, they will need to first consider the undertakings' research and development costs, including costs that have not resulted in commercially exploitative products.[108] This is because innovative companies usually engage in dozens of research projects to develop one successful technology. Accordingly, considering only the R&D costs directly related to the development of a given technology would not be sufficient.[109] In other words, an undertaking that has devoted lot of resources to the development of new technology should be able to recover its investment costs through royalty revenues.

The negative effects of price control vis-à-vis innovation and investment has, in particular, been discussed by *Glader* under the heading *"Innovation Markets and Competition Analysis."* According to this author, setting royalties well in excess of the specific R&D costs should present a perfectly rational pricing policy, as it enables companies to compensate themselves also for failed R&D projects and thus provides a strong incentive to engage in further innovations.[110] Accordingly, a number of reasons support that the existing case law from the ECJ is poorly suited to control the level of royalties charged by licensors and thus hardly adequate to be used by competition authorities in Member States and by national courts seeking to determine whether a license royalty is excessive under EU competition law. Therefore, at this stage, as argued by *Anderman and Kallaugher* there simply is not enough experience regarding the application of Article 102 (a) TFEU in the context of licensing, leaving the industry with only an anecdotal basis for the assessment of what enforcing authorities might find constitute unfair or excessive pricing terms.[111]

107 Steven D. Anderman & John Kallaugher, 2*Technology Transfer and the New EU Competition Rules, Intellectual Property Licensing after Modernisation,"* Oxford University Press, 2006, p.273.

108 Supra, Jones & Sufrin, p.590.

109 See the European Commission's Guidelines on the application of Article 81 of EC to Technology Transfer Agreements, 2004 , OJ C101/2.

110 Marcus Glader,*"Innovation Markets and Competition Analysis,"* Edward Elgar Publishing Inc., 2006, p.262.

111 Supra note Steven D. Anderman & John Kallaugher, p. 272-275.

3.3.2 Price Discrimination under Article 102 (c) TFEU

On its face, Article 102 (c) TFEU requires that a two-step test be applied in order to determine whether a certain undertaking's pricing policy violates EC competition law. First, the licensing term should be "*dissimilar*" assessed against terms applied in equivalent transactions. Second, the pricing policy should result in the licensee alleging discrimination being competitively disadvantaged.

The wording of the first requirement is important because Article 102 (c) TFEU does not require licensors to treat licensees in the exact same way. It is sufficient if the conditions offered to licensees by the dominant undertaking are "*similar*". In other words, the licensing terms as between licensees can vary as long as such terms do not significantly affect the costs imposed to end consumers.[112] However, as identified by *Anderman* and *Kallaugher* in a licensing context it is difficult to determine whether two transactions are equivalent, as several factors can be invoked to justify possible differences. As identified above, this is due to the fact that many IP licensing agreements, especially within standardization, contain an element of cross-licensing and due to the fact that the size of patent portfolios of potential licensees tends to vary considerably. In other words, in reality most IP licenses do not fulfil the "*equivalent transactions*" requirement under Article 102 (c) TFEU.

The requirement under Article 102 (c) TFEU for competitive disadvantage to be at hand seems to suggest that the dominant company's customers should be competing with each other. This condition is more likely to be met in practise, as demonstrated for example within the area of the GSM standard where most of the licensees do indeed compete on downstream markets. However, all of this is only relevant where the first condition of Article 102 (c) TFEU is already met.

The above strongly suggests that, if one were to force FRAND undertakings to offer identical licensing terms to all licensees, this would prevent efficient price discrimination and arguably discourage innovation, as licensors no longer would be able to freely extract proper return for their patent portfolios.[113] As argued by *Geradin* and *Petit* in article *"Price Discrimination under EC Competition Law: Another Antitrust Doctrine in Search of Limiting Principles?*" such a system would lead to undue rigidity within the area of licensing schemes and in effect

112 Supra note Steven D. Anderman & John Kallaugher, p.275.

113 Damien Geradin, "Abusive Licensing in an IP Licensing Context: An EC Competition Law Analysis," European Competition Law, 2007, p. 26-28.