

# Standard setting, competition law and FRAND licensing in Europe and the United States

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## 1. Standards setting

Standards are based on voluntary cooperation between industry, public authorities and other interested parties and seek to set out “technical or quality requirements with which current or future products, production processes, services or methods may comply”.<sup>1</sup> Standardisation plays a particularly important role in the information and communication technologies (ICT) sector, where the need for interoperability and economies of scale and scope are critical to promote innovation and competition, especially as technologies converge.

Most IP issues arising from technical standards concern patents. It is obvious that technical standards are likely to comprise features that are the subject of patents, and there is little point developing a standard if its implementation can be blocked by a patent holder. In practice, patent holders that participate in standard-setting agree to grant licences to each other and to third parties, and if this commitment is not honoured there can be competition law consequences.

### 1.1 Technical standards

Examples of technical standards include the MPEG-2 digital video compression standard, the 3G standard for mobile telecommunication services and the Blu-ray standard for optical disc storage.

Standards can be facilitated or developed by a standard-setting organisation (SSO), or can emerge spontaneously without any form of agreement: so-called ‘*de facto* standards’. The focus in this chapter will be on standards developed by SSOs.

There are many different types of SSO. These can be broken down into the following:

- ‘Formal’ SSOs – these set standards based on institutionalised and consensual procedures in which all interested stakeholders can participate. There are three main sub-types:

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1 European Commission Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal cooperation agreements (OJ 2011 C11/1, 14.1.2011 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:011:0001:0072:EN:PDF>), paragraph 257.

- international SSOs, such as the International Organisation for Standardisation (ISO);
- European standards organisations (ESOs),<sup>2</sup> such as the European Telecommunications Standardisation Institute (ETSI), responsible for developing standards in the ICT sector, and
- national standardisation bodies, such as the British Standards Institute.

Typically, these formal SSOs have numerous members who can contribute to and influence the standards set by that body. For example, ETSI has over 700 direct members drawn from more than 60 countries worldwide.<sup>3</sup> Its members include technology developers, network operators, handset manufacturers and many government and regulatory bodies who meet regularly with ETSI to agree standards.

- ‘Informal’ standardisation consortia – these are set up by groups of companies to draft sectoral standards. It is these types of organisation, as opposed to the ESOs, that have arguably emerged as the world-leading bodies in the development of ICT standards.<sup>4</sup> For example, standards covering internet protocols were established by the Internet Engineering Task Force, a team consisting of network designers, operators, vendors, and researchers,<sup>5</sup> and the Blu-ray standard was developed by the Blu-ray Disc Association, a group representing makers of consumer electronics, computer hardware and motion pictures.<sup>6</sup>

## 2. Intellectual property and standards

‘Standard-essential patents’ (SEPs) are those that are infringed, as a matter of technical inevitability, by implementation of the standard. In effect, they cannot be designed around. Such patents are of enormous value given the high sales volumes of standards-compliant consumer and other devices, on which royalties must be paid.<sup>7</sup> In the ICT sector, each device typically features inventions patented by multiple competitors, who cross-license each other.<sup>8</sup> The relative size of each company’s stack of essential patents can make a difference in licence negotiations, although its precise correlation to the amount of any royalty payable will vary according to circumstances.

Because of the inevitability of infringement by a large number of businesses, so-

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2 European Committee for Standardisation (CEN), European Committee for Electrotechnical Standardisation (CENELEC) and ETSI are recognised as the European Standards Organisations under Council Directive 98/34/EC which sets a procedure for the provision of information in the field of technical standards and regulations (OJ L 204, July 21 1998).

3 [www.etsi.org/WebSite/membership/currentmembers.aspx](http://www.etsi.org/WebSite/membership/currentmembers.aspx).

4 Annex 2 to the Commission Staff Working Document entitled “The Challenges for European Standardisation”, pp 14 and 15 – [http://ec.europa.eu/enterprise/policies/european-standards/files/standards\\_policy/role\\_of\\_standardisation/doc/staff\\_working\\_document\\_en.pdf](http://ec.europa.eu/enterprise/policies/european-standards/files/standards_policy/role_of_standardisation/doc/staff_working_document_en.pdf).

5 [www.ietf.org/about](http://www.ietf.org/about).

6 [www.blu-raydisc.com/en/Technical/FAQs/HistoryandAssociation.aspx](http://www.blu-raydisc.com/en/Technical/FAQs/HistoryandAssociation.aspx).

7 Harhoff *et al.* point out the increasingly strategic use of patents to block rivals and extract concessions, as a consequence of the increased complexity of modern technology, with potential anti-competitive consequences: “The Strategic Use of Patents and its Implications for Enterprise and Competition Policies”, Tender for No ENTR/05/82 Final Report – July 8 2007.

8 See Biddle, White & Woods, “How Many Standards in a Laptop? (and other Empirical Questions)”, *Soc Sci Res Network* September 10 2010, available at SSRN: <http://ssrn.com/abstract=1619440> or <http://dx.doi.org/10.2139/ssrn.1619440>, identifying 251 standards embodied or utilised in a laptop computer.

called non-practising entities (sometimes referred to as ‘patent assertion entities’ or ‘trolls’) also purchase essential patents purely for the purpose of generating royalties.

## 2.1 Intellectual property policies of Standard-setting organisations

SSOs need to engage with intellectual property for two principal reasons:

- first, because a standard will be inoperable if implementation is blocked by patent rights; and
- second, because standards and essential patents have competition law implications.

SSOs therefore encourage:

- disclosure of patents that are believed to be essential, or potentially essential, to relevant standards or proposed standards; and
- commitment to licensing of such patents.

The licensing commitment is not conditional upon the patent being proven essential. But a patent holder that has declared a belief that specific patents are essential, or potentially essential, to a standard should subsequently be able to make a correcting statement if that interpretation changes – for example, if a patent is declared by a court (or conceded by the patentee) to be non-essential.

The common patent policy for ISO/International Electrotechnical Commission (IEC)/International Telecommunication Union (ITU), which is also endorsed by CEN and CENELEC, encourages the early disclosure and identification of relevant patents, and states that patented technology may be incorporated into standards subject to provisos: in summary, the patent holder must provide a statement, in a prescribed form, of willingness to negotiate irrevocable licences on a non-discriminatory basis on fair and reasonable terms and conditions (although not necessarily free of charge). This licensing declaration remains in force unless superseded by a more favourable declaration (eg, offering licences free of charge). Identification of specific patents is encouraged, but is only mandatory for patentees who refuse to grant licences.

ETSI's IPR rights policy has been the subject of much scrutiny in telecoms patent disputes in Europe. Where essential intellectual property is identified, the owner is given three months to offer an irrevocable undertaking that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory terms and conditions, failing which the work on the relevant parts of the standard may be suspended. ETSI members refusing to give licence commitments must explain themselves to the director general unless a viable alternative technology exists. The ETSI policy is expressed to be governed by French law, as is the licensing declaration in the prescribed form.

Since such licensing declarations and undertakings are stated to be irrevocable, it appears that they have effect even where a patent is subsequently found to be non-essential. This is not entirely clear, however.<sup>9</sup>

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9 Paragraph 3.2.2 of ETSI's Guide on Intellectual Property Rights, which contemplates "Removal of IPR disclosures at the request of the IPR holder", refers to publication of associated licensing declarations and states that "removal shall be tracked in the IPR online database". This implies that declarations are in fact revocable.

## 2.2 Patent pools

A patent pool involves multiple undertakings agreeing to 'pool' their technologies and license them to each other or to third parties. This may be associated with the development of a standard or may arise separately.

Typically, a patent pool is created through an agreement between licensors owning essential patents. A pool need not include all essential patent holders. The licensors appoint a patent pool administrator<sup>10</sup> to oversee the operation of the patent pool. It is the role of the administrator to evaluate essentiality, identify and market to licensees, execute and enforce uniform licence agreements, collect royalties and distribute revenue fairly to participating licensors. As this involves effort and expense, it will not be appropriate unless the advantages over purely bilateral licensing are clear – for example, to overcome patent 'thickets' whereby individual licence negotiation is uneconomical.

## 3. Competition law and the establishment of standards and patent pools in Europe

### 3.1 EU competition law principles

Article 101(1) of the Treaty on the Functioning of the European Union (TFEU) prohibits, as incompatible with the internal market, agreements between undertakings that may affect trade between member states and which have the object or effect of preventing, restricting or distorting competition within the common market.

Agreements that infringe Article 101(1) are void and unenforceable in respect of the provisions that restrict competition (Article 101(2)). Exemption under Article 101(3) may be possible, where the beneficial aspects of the agreement outweigh its anti-competitive effect, ie, the agreement contributes to technical or economic progress, allows consumers to get a fair share of the benefits, does not impose restrictions unless indispensable and does not substantially eliminate competition.

Article 102 of the TFEU prohibits the abuse by one or more undertakings of a dominant market position. The following examples of abuse are given: "directly or indirectly imposing unfair purchase or selling prices or unfair trading conditions", "limiting production, markets or technical development to the prejudice of consumers", or "applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage". This is not an exhaustive list of all forms of abuse that have been developed in case law.

The European Commission has the ability as the enforcement authority to impose fines on parties that infringe Articles 101 and 102 of up to 10% of their annual worldwide group turnover.<sup>11</sup>

### 3.2 Application to standards

The commission takes the view that, under certain conditions, a standardisation

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10 Examples include MPEG LA, One-Blue, Sisvel and Via Licensing.

11 The commission has yet to impose any fines on participants in technical standards for infringing Articles 101 and 102.

agreement is not likely to produce restrictive effects on competition. Such conditions are set out in the commission's guidelines on the applicability of Article 101 of the TFEU to horizontal cooperation agreements (the guidelines)<sup>12</sup> and effectively create an informal safe harbour to avoid the scope of Article 101(1) of the TFEU. According to the safe harbour, standard-setting will normally not restrict competition if the following four conditions are met.

**(a) *Participation in the standard-setting is unrestricted***

The rules of the SSO must be unrestricted to ensure that all competitors in the market or the markets affected by the standard are able to participate in the process of selecting the standard. The relevant SSO would also need to have objective and non-discriminatory procedures for allocating voting rights and, if relevant, objective criteria for selecting the technology to be included in the standard.<sup>13</sup>

**(b) *The procedure for adopting the standard is transparent***

The standard-setting process must be transparent, so that stakeholders can effectively inform themselves of upcoming, ongoing and finalised standardisation work in good time at each stage of the development of the standard.<sup>14</sup>

**(c) *The standard is non-binding***

The members of an SSO must remain free to develop alternative standards or products that do not comply with the agreed standard.<sup>15</sup> In the case of *Philips/VCR*, the standards were in respect of the manufacture of VCR equipment which obliged the parties to manufacture and distribute only cassettes and recorders conforming to the VCR system licensed by Philips. The parties were prohibited from changing to manufacturing and distributing other video cassette systems. The Commission held that such prohibitions constituted a restriction of competition.<sup>16</sup>

**(d) *Access to the standard is available on fair, reasonable and non-discriminatory (FRAND) terms***

The rules of the SSO must ensure effective access to the standard on FRAND terms.<sup>17</sup>

### 3.3 Application to patent pools

Historically, patent pools have been viewed in principle as anti-competitive as such arrangements have the potential to raise the barrier to market entry or to create market powers. However, in the last decade, competition authorities have become more lenient towards the formation of patent pools as it is recognised that they have the potential to provide clear pro-competitive benefits.<sup>18</sup> For licensees, patent pools

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12 See footnote 1 above.

13 Paragraph 281 of the guidelines.

14 Paragraph 282 of the guidelines.

15 Paragraph 293 of the guidelines.

16 Commission Decision of December 20 1977 in Case IV/29.151 – video cassette recorders, OJ L 47/42, February 18, 1978, paragraph 23 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1978:047:0042:0047:EN:PDF>

17 Paragraph 283 of the guidelines.

provide a one-stop shop to access patents under a single licence, as opposed to negotiating licences separately with each patent owner. For licensors, such pools provide a convenient way to generate income.

Nonetheless, the structure and constitution of patent pools may have the potential to restrict competition by excluding potential members from the pool, and the exchange of sensitive information could facilitate collusion.

The safe harbour conditions outlined above apply generally in the context of patent pool agreements. In addition, the Commission recognises that a patent pool presents fewer problems when the technologies in question are complementary, ie, when all the technologies are required to produce the product or carry out the process to which the technologies relate, rather than when the technologies are competitive (substitutes): where patents pooled are substitutes, there is no price competition. As a general rule, the commission considers the inclusion of substitute technologies as a violation of Article 101(1) of the TFEU and, in the case of pools comprising to a significant extent substitute technologies, it is unlikely that there would be an exemption under Article 101(3).<sup>19</sup> The assessment of whether a patent pool is anti-competitive is ongoing, since a particular technology included in the pool may become non-essential during the lifetime of the pool and may turn a non-infringing pool into an infringing one.<sup>20</sup>

On the other hand, a pool composed only of essential technologies, ie, where there are no substitutes for the technology either inside or outside the pool and where the technology is needed to develop the product or process for which the pool was set up – will generally not restrict competition, irrespective of the market position of the parties.<sup>21</sup>

### 3.4 Abuse of dominance

Infringements under Article 102 are likely to arise in the ICT sector, where the proprietary technology used in a standard will tend to increase the market power of the holder of the essential intellectual property rights. However, there is no presumption that holding or exercising IPR constitutes the possession or exercise of market power.<sup>22</sup> Whether a standard confers market power must be assessed on a case-by-case basis.

### 3.5 Evolution of SSOs' IP rights policies on European competition compliance

SSOs have developed IP policies to enable them to identify essential intellectual property at an early stage of the standard-setting process, thereby reducing the risk of rights holders restricting access to an adopted standard.

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18 In 2000, the commission approved the technology agreement between the major electronics companies Hitachi, Matsushita Electrical, Mitsubishi Electrical, Time Warner and Toshiba to pool their respective patents covering applications of Digital Versatile Disc (DVD) standard technology.

19 Paragraph 219 of the European Commission Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements (the Technology Transfer Guidelines, OJ C 101/2, April 27 2004 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2004:101:0002:0042:EN:PDF>).

20 Paragraph 222 of the Technology Transfer Guidelines.

21 Paragraph 220 of the Technology Transfer Guidelines.

22 Paragraph 269 of the guidelines.

In 2000, the commission launched an investigation into ETSI's IP rights policy following concerns that the policy did not protect against the risk of patent ambush.<sup>23</sup> The policy in question required members to use reasonable endeavours to inform ETSI in a timely manner of any essential intellectual property of which they became aware. The commission was concerned that the policy did not encourage early disclosure but enabled rights holders to conceal essential intellectual property until the standard was developed. In response to the commission's concerns, ETSI strengthened its policy, among other things by removing a reference to 'becoming aware' of an essential patent as a condition for disclosure.<sup>24</sup>

The lessons learned in the ETSI case are reflected in the revised guidelines which provide more guidance on how best to develop IP policies. In particular, the guidelines note that an IPR policy must require participating rights holders to provide an irrevocable commitment in writing to offer to license their essential intellectual property to all third parties on FRAND terms, prior to the adoption of the standard. Participating rights holders must also commit to ensuring that any third party to which the participant transfers its intellectual property is bound by the FRAND commitment.<sup>25</sup>

On October 9 2012, ETSI reported that the ETSI IP rights special committee had embarked on discussions on whether ETSI should make further policy changes, including:

- changes to provide guidelines or principles for compensation elements under the FRAND commitment;
- whether to permit declarations to be conditional upon reciprocity;
- the availability of injunctions; and
- changes to ETSI's IPR policy to bring its approach on the transfer of a FRAND commitment in line with the commission's guidelines.<sup>26</sup>

### 3.6 FRAND licence requirements

The commission's objective is to ensure that all essential intellectual property incorporated in a standard will be available to all users on FRAND terms and to prevent IP rights holders from impeding the implementation of a standard by refusing to license or by doing so on unfair, unreasonable or discriminatory terms.<sup>27</sup> This was reconfirmed by Joaquín Almunia, the European commissioner of competition, in a speech on February 10 2012 when he said:

*Standardisation processes must be fair and transparent, so that they are not in the hands of established firms willing to impose their technologies. But it is not enough. We must also ensure that, once they hold standard essential patents, companies give*

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23 Case 37926 (Sun/ETSI) – [http://ec.europa.eu/competition/publications/cpn/2011\\_1\\_1\\_en.pdf](http://ec.europa.eu/competition/publications/cpn/2011_1_1_en.pdf).

24 Press release December 12 2005, IP/05/1565.

25 On November 30 2011, the ETSI IPR policy was updated to grant power on the director general to request the owner of an essential IP right to give, within three months, an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on FRAND terms under such IP right; and in case of transfer or assignment, the member is under a duty to use reasonable efforts to notify the assignee or transferee of the undertaking made to ETSI with regard to the essential IPR.

26 [www.isacc.ca/isacc/\\_doc/GSC/GSC16bis-IPR-03.ppt](http://www.isacc.ca/isacc/_doc/GSC/GSC16bis-IPR-03.ppt).

27 Paragraph 287 of the guidelines.

*effective access on fair, reasonable and non-discriminatory terms.*<sup>28</sup>

It is unclear whether this is intended to include companies that did not participate in, or even know about, the standard. There is also no clear definition of the terms 'fair', 'reasonable', and 'non-discriminatory' either individually or taken together, and there has been no European case law to establish such definitions. Furthermore, few SSOs provide an interpretation of FRAND terms when setting industry standards as they are under no obligation to do so. On November 11 2011, Apple wrote to ETSI arguing that FRAND principles were not being consistently adhered to and suggested the creation of a FRAND licensing framework.<sup>29</sup>

The lack of certainty in this area has led to antitrust investigations initiated by the commission. On October 1 2007, the commission opened antitrust proceedings against Qualcomm, a US chipset manufacturer, following allegations that Qualcomm breached Article 102 by licensing its patents essential to the WCDMA standard on non-FRAND terms.<sup>30</sup> The complaints further alleged that charging non-FRAND royalties would lead to higher handset prices, a slower development of the 3G standard, and a slower adoption of the 4G standard. On November 24 2009, the commission closed its investigation without reaching any formal conclusions, following the withdrawal of complaints.<sup>31</sup>

The commission has provided guidance on the FRAND criteria in the guidelines, which state that, in case of dispute, the assessment of whether fees charged for access to intellectual property are unfair or unreasonable should be based on whether the fees bear a reasonable relationship to the economic value of the intellectual property. Assessing the economic value and cost of essential intellectual property is extremely difficult, especially when one takes into account the past research costs of rights holders that did not result in commercially exploitable products. The commission therefore puts forward the following four methods for determining a 'reasonable relationship':

- Compare the licensing fees charged for the relevant patents in a competitive environment before the industry has been locked into the standard (*ex ante*) with those charged after the industry has been locked into it (*ex post*);<sup>32</sup>
- Obtain an independent expert assessment;<sup>33</sup>
- Rely on previous unilateral *ex ante* disclosures of most restrictive licensing terms in the context of the specific standard-setting process.<sup>34</sup> The commission recognises that it is important for parties involved in the selection of a standard to take an informed decision based on the advantages and disadvantages of alternative technologies, from a technical and pricing perspective. Unilateral disclosure prior to the adoption of a standard will not normally lead to a restriction of competition within the meaning of Article

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28 Speech entitled "*Quo vadis Europa? New Frontiers of Antitrust 2012*", February 10 2012 [http://europa.eu/rapid/press-release\\_SPEECH-12-83\\_en.htm](http://europa.eu/rapid/press-release_SPEECH-12-83_en.htm).

29 [www.scribd.com/doc/80899178/11-11-11-Apple-Letter-to-ETSI-on-FRAND](http://www.scribd.com/doc/80899178/11-11-11-Apple-Letter-to-ETSI-on-FRAND).

30 Commission MEMO/07/389 [http://europa.eu/rapid/press-release\\_MEMO-07-389\\_en.htm](http://europa.eu/rapid/press-release_MEMO-07-389_en.htm).

31 Commission MEMO/09/516 [http://europa.eu/rapid/press-release\\_MEMO-09-516\\_en.htm](http://europa.eu/rapid/press-release_MEMO-09-516_en.htm).

32 Paragraph 289 of the guidelines.

33 Paragraph 290 of the guidelines.

34 *Ibid.*



101(1), provided that it does not serve as a cover to jointly fix prices.<sup>35</sup> A distinction is made between *ex ante* disclosures of licensing terms and *ex ante* negotiations between the licensor and potential licensees, with the latter scenario likely to raise concerns of price-fixing and therefore a breach of competition law; or

- Draw on royalties charged for the same intellectual property in other comparable standards.<sup>36</sup>

The guidelines leave open the question of what other elements, apart from royalty levels, may be relevant to determining FRAND licence terms. It must be noted that SSOs are not required to verify whether the licensing terms of participants fulfil the FRAND commitment. Participants must assess for themselves whether their licensing terms and, in particular, the fees they charge, fulfil the FRAND commitment.

### 3.7 Transfer of essential patents

To ensure the effectiveness of the FRAND commitment, the commission recommends that rights holders ensure that any company to which they transfer intellectual property is bound by that commitment, for example, through a contractual clause between the buyer and seller.<sup>37</sup> ETSI's Guide on Intellectual Property Rights states that it is desirable for licensing undertakings to transfer automatically to the new owner, but recognises that this may not be the effect of the law in every jurisdiction.<sup>38</sup> In one case highlighting the commission's expectations, IPRCom agreed to adopt Bosch's earlier commitment to grant irrevocable licences on FRAND terms, following discussions with the commission.<sup>39</sup>

### 3.8 Patent ambush

A 'patent ambush' can occur where a company intentionally conceals that it has essential intellectual property for a standard, and asserts its intellectual property only when the standard has been agreed. In such cases, the rights holder may be in a position to exploit its dominance by charging excessive royalties to those now locked in to the technology.

A prominent example of alleged patent ambush arose in the commission's investigation into Rambus. Rambus's patents related to Dynamic Random Access Memory (DRAM) chips. In December 2002 Hynix Semiconductor, a competitor of

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35 Paragraph 299 of the guidelines.

36 *Ibid.*

37 Paragraph 285 of the guidelines and see, eg, *Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC, Part I, Section 7*. ([http://isotc.iso.org/livelink/livelink/fetch/2000/2122/3770791/Common\\_Guidelines\\_01\\_March\\_07.pdf](http://isotc.iso.org/livelink/livelink/fetch/2000/2122/3770791/Common_Guidelines_01_March_07.pdf)).

38 ETSI Guide on Intellectual Property Rights, Version adopted by GA#58 on November 30 2011. (<http://etsi.org/WebSite/document/Legal/ETSI%20Guide%20on%20IPRs%20November%202011.pdf>), section 4.2.

39 MEMO 09/549 ([http://europa.eu/rapid/press-release\\_MEMO-09-549\\_en.htm?locale=en](http://europa.eu/rapid/press-release_MEMO-09-549_en.htm?locale=en)). It is not, however, clear that such expectations apply to a divisional application filed by the transferee. See *IPCom v Nokia*, Mannheim District Court, Germany, February 2011 (7 O 100/10) in which the patentee was held not bound by a predecessor's declaration in respect of a new divisional.

Rambus, complained to the commission that Rambus engaged in intentional deceptive conduct by not disclosing the existence of patents and patent applications in the development by the Joint Electron Device Engineering Council (JEDEC), a US-based standard-setting organisation, of an industry-wide DRAM standard subsequently applied in around 95% of personal computers.

On July 30 2007, the commission notified Rambus of its statement of objections. The commission came to the preliminary conclusion that Rambus may have infringed Article 102 by abusing a dominant position in the market for DRAMs. In particular, the commission was concerned that Rambus had engaged in a patent ambush by intentionally concealing that it had patents and patent applications which were relevant to technology used in the JEDEC standard, and subsequently claiming unreasonable royalties for the use of those patents.

On December 9 2009, the commission accepted commitments by Rambus to address the commission's concerns. In particular, Rambus agreed to a worldwide cap on its royalty rates for certain DRAM patents for a period of five years.<sup>40</sup>

In a Dutch case concerning alleged infringement of a patent that was essential to the JPEG standard, The Hague District Court suspended a previously granted injunction on the grounds that the patentee had abused its patent rights and was estopped from enforcement as a result of having failed to disclose its patent when participating in the standard-setting process.<sup>41</sup>

### 3.9 Royalty stacking

Royalty stacking arises when numerous licences are required, under essential patents, to make a product, resulting in an unacceptably high royalty burden. This is a particular concern in the ICT sector, where technical standards incorporate numerous patented technologies.

One way to overcome royalty stacking is through *ex ante* disclosure. This requires those involved in the standard-setting process to commit to licensing terms before the protected technology is incorporated in the standard. The commission recommends *ex ante* disclosures of licensing terms, to ensure that technology royalties are fair. ETSI contemplates voluntary *ex ante* disclosures of licensing terms by licensors of essential intellectual property, but does not itself become involved in these, other than as a depository of information as to how to access such terms.<sup>42</sup>

From a competition law perspective, *ex ante* disclosure can have pro-competitive benefits. For example, it promotes price competition between technologies before a standard becomes locked in, and allows informed decision-making. However, without appropriate safeguards, it also has the potential to be anti-competitive, especially where royalty rates are negotiated.

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40 IP/09/1897 ([http://europa.eu/rapid/press-release\\_IP-09-1897\\_en.htm](http://europa.eu/rapid/press-release_IP-09-1897_en.htm)).

41 *Koninklijke Philips Electronics NV v LG Electronics Benelux Sales BV*, June 11 2007, 287026/KG ZA 07-528. The court also held that the position was the same whether the patentee had actively proposed parts of the standard or was present merely as an observer.

42 Paragraph 290 of the guidelines.

43 [www.etsi.org/website/aboutetsi/iprsinetsi/Ex-ante.aspx](http://www.etsi.org/website/aboutetsi/iprsinetsi/Ex-ante.aspx).