EC and DoJ approval of the 3G Patent Platform

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On November 11-12, 2002, the European Commission and the US Department of Justice's Antitrust Division issued antitrust 'clearances' of the 3G Patent Platform, following the Japan Fair Trade Commission's earlier approval. The Patent Platform was developed after years of effort by all segments of the mobile telephony industry (equipment makers, system operators and peripherals producers, in parallel to the industry's work in setting the third generation technical standards through the International Telecommunications Union). Learning from the mistakes and history of the second generation of mobile telephony, the 3G Patent Platform is designed to solve some of the tough patent licensing problems presented by multiple companies owning perhaps hundreds of patents essential for implementation of the complicated technologies. Significantly, both the industry and the competition agencies have now agreed on innovative new techniques to reduce patent licensing costs and delays for globally inter-operable mobile telephony complying with the third generation standards.

The US Justice Department's press release states that the 3G Patent Platform can:

- achieve substantial efficiencies in identifying essential patents;
- reduce holdup problems that can occur in negotiations with individual users; and
- aid in the rapid introduction of 3G wireless services.

In the words of the press release, the US's approval, however, came only after the 3G Patent Platform was revised "to make substantial modifications to address the Department's competitive concerns".

In this article, I will look at three basic questions: What is '3G'? What is innovative about the 3G Patent Platform? What were the 'competitive concerns'?

The Third Generation (3G) standards and the plethora of 'essential' patents

Today, two generations of mobile telephony are in use, the first being analog, and the second being a combination of various digital transmission technologies, allowing some additional services as well as voice telephony. The third generation of mobile telephony, commonly called '3G', will be digital, enabling not only wireless voice services but data transmission at rates much higher than those in the second generation (moving from 2G's approximately 9.6 kilobits per second to 3G's rates of between 144 kilobits per second to 2 megabits per second), with true global inter-operability.

While the industry originally sought a single 3G technical standard, the work under the International Telecommunications Union auspices finally resulted in a third generation standard with five different radio interfaces, which determine how a signal travels over the air from a user's handset to an operator's terrestrial network. Each of the five radio interfaces has evolved from one or more of the 2G technologies now in use. By design, each of the five agreed-upon interfaces will afford a backwards compatibility with 2G networks, but all will have 'hooks' that enable them to be used inter-operably with systems employing other radio interfaces. The five—which are important because they triggered competitive concerns at the US Justice Department—are:

CDMA-2000 (IMT – Multicarrier)
W-CDMA (IMT – Direct Spread)
TD-CDMA (IMT – Time Code)
TDMA-EDGE (IMT – Single Carrier)
DECT (Digital Enhanced Cordless Telecommunications, IMT – Frequency Time)

For example, W-CDMA is descended from the Global Standard for Mobile Communications ('the GSM standard') widely mandated in Europe and many countries elsewhere. CDMA-2000, in contrast, evolved out of the IS-95 Code Multiple Division Access (CDMA), one of the two widely used 2G technologies in the United States, while TDMA-EDGE builds on the IS-136 Time Division Multiple Access, the other widely used 2G technology in the United States.

The Preface to the 3G Patent Platform Specification notes that over 100 companies are thought to own patented technologies essential to the realisation of 3G systems. Already, at least 45 firms have filed declarations with the ITU, the Association of Radio Industries and Businesses, or the European Telecommunications Standards Institute. The 3G Patent Platform Partnership (some 19 telecommunications companies, both operators and equipment makers) estimates that several hundred different patents, among several thousand publicly claimed as essential, will actually be determined to be 'essential patents' in implementing 3G standards, and that probably in excess of 150 firms will be involved in producing 3G compliant products. On an individually negotiated basis, the number of licences might well exceed 15,000 (ignoring existing bilateral agreements). Past experience in the 2G world suggests that it requires an average of three persons during a six-month period to conclude one licence agreement. In short, if 3G was to be available to any but the very largest firms, the industry had to come up with a mechanism to reduce patent licensing transaction costs and delays.

The principal licensing problems for new technologies are the identification of those patents that are essential for the firm's products or services and the necessity of negotiating with the numerous essential patent holders. The uncertainty about the time involved and the total cost of acquiring licenses prevents a substantial number of companies from implementing new technology and becoming competitors

in the relevant industry. If companies, whether new entrants or existing industry participants, can limit the time involved and the negotiating costs, and be assured of fair, reasonable and non-discriminatory royalty rates for a significant portion of the patents necessary for implementing the new technology, it is likely that the market for the new technology will include more competitors and be more competitive. Another major concern for 3G was that the cumulative royalty costs for the essential patents (far more numerous than the number required of 2G) might prove excessive, and the uncertainties about the cumulative costs would slow down 3G deployment or, even worse, prevent access to many companies because of excessive costs. Unlike patent pools, the 3G Platform has been designed to handle, efficiently and effectively, a large and initially unknown number of essential patents, patent holders, and licensees.

The Platform mechanism was created and defined by the industry-wide Universal Mobile Telecommunications System (UMTS) Intellectual Property Rights Working Group of some 42 organisations, with the resulting Specification being owned by the UMTS Intellectual Property Association. A smaller group of 19 companies formed the 3G Patent Platform Partnership to promote the effort and see to the necessary governmental clearances. They faced tasks more formidable than those faced by the Motion Picture Experts Group in the MPEG I and MPEG II situation. Unlike MPEG, it was not thought feasible to produce a simple patent pooling arrangement, with a patent bundle including all 3G essential patents, because of the great number of essential patent holders and because any given producer or user might need only a small portion of the patents involved. And, unlike the blanket licence technique used in Broadcast Music/ASCAP (which the Platform analytically resembles), many potential licensees would not need the full bundle, which would likely cost more than the portion required for whatever part of the 3G system the firm was participating in. Further, many licensors and licensees might wish to deal with others who have essential patents as part of larger bilateral patent programmes. But the industry participants could and did agree on a means of determining essentiality of patents and on standard licensing terms, as well as on a means of avoiding delays while other terms were being decided. Above all, industry participants made plain that the solutions agreed to would have to be voluntary. The final result was an imaginative and innovative Patent Platform, with some distinctive features.

The innovative aspects of the 3G Patent Platform

The 3G Patent Platform involves three basic elements: (a) an Evaluation Mechanism for determining the essentiality of patents to the 3G standards, (b) a Standard Licence (and Interim Licence), and (c) a Licensing Administrator. If a firm wishes to join the Platform and seek a determination of whether its patents are 'essential' to the 3G standards, it signs a Framework Agreement which requires that it license out all of its essential patents at the royalty rate fixed in that Platform, subject to a Maximum Cumulative Royalty Rate (also determined by that Platform) which is the maximum cumulative royalty that a licensee of that Platform will pay for all licenses needed for that 3G standard, to be applied to the ultimate user's end-product price. The licensee is entitled to an Interim Licence granted immediately, subject to any further negotiations between licensor and licensee, the default being the Standard Licence. Similarly, if anyone who wishes to be a licensee joins the Platform, that firm commits to putting its essential patents into the Platform procedures. The Licensing Administrator basically handles the mechanical details of establishing the allocations of royalty under the Maximum Cumulative Royalty Rate among the various patent holders. Interestingly, the actual license is between the Licensor and the Licensee, and not with the Platform, which does not collect and remit the licence fees. If members of the Platform desire to enter into licenses outside the terms of the Standard Licence, they are free to do so. Thus, the Platform assures (a) identification of essential patents, and (b) prompt licensing under predetermined "fair, reasonable, and non-discriminatory" terms under the Standard Licence (or Interim Licence), with (c) knowledge in advance of the Maximum Cumulative Royalty Rate for all licenses needed from that Platform.

Significantly, the Platform mechanism provides either or both licensing parties with an option to enter into bilateral negotiations in the furtherance of their legitimate self-interests. In the definition phase of the Platform, several companies involved in multiple business sectors requested some flexibility in licensing arrangements. In particular, these companies sought to maintain the freedom to (i) include non-essential patents in their actual licenses, (ii) include technologies outside the scope of 3G mobile communication (IMT-2000), (iii) include terms and conditions more favourable to either party than offered in the Standard Licence Agreement, (iv) include any other form of compensation (eg non-monetary, such as use of chip production facilities and part of chip production profits in exchange for free use of chip design and intellectual property under licence), and (v) negotiate a broader cross-licence permitting usage of a range of technologies (within and outside 3G) in order to simplify the royalty administration and to avoid the release of commercially sensitive information such as volume of sales and ex-works price. Without the ability to negotiate outside of the Platform framework, this flexibility would be lost and the companies that value such flexibility likely would not join the Platform. It is believed that the optional bilateral negotiating flexibility is likely to catalyse the creation of new business opportunities and broader dissemination of the relevant technologies, an efficient and pro-competitive result.

An essential patent holder, for example, can seek an alternative arrangement with a potential licensee outside of the Platform mechanism, but cannot force such a licensee to accept unreasonable terms, for the potential licensee is entitled to receive immediately an Interim Licence Agreement, and the patent holder receives royalty payments during the negotiating phase. If, pursuant to the Platform's dispute resolution process, the essential patent holder's demands are deemed unfair, unreasonable, or unduly discriminatory, and refuses to sign the Standard Licence Agreement, then the Licensing Administrator is authorised to issue the Standard Licence (to replace the Interim Licence that has operated during negotiations). Under the Platform Agreement, the 'worst' licensing arrangement an essential patent holder must accept is the Standard Licence Agreement, subject to the Maximum Cumulative Royalty Rate, which the patent holder explicitly accepted as commercially reasonable by joining the Platform in the first place.

The participants in the Platform's definition phase anticipated that a significant

proportion of Platform members will simply take full advantage of the Standard Licence Agreement. Accepting the Standard Licence Agreement implies a substantial reduction in the time and money invested in the licensing of essential patents for both parties. And membership in the Platform will assure a firm that it has identified those patents that have been determined by the Essentiality Evaluation mechanism as being 'essential patents' for the 3G application.

The competitive concerns of the US Justice Department

The Japan Fair Trade Commission cleared the original version of the Platform by a letter dated December 14, 2000, and the European Commission's favourable action on a 'comfort letter' was thought to be shortly forthcoming. However, the US Justice Department's Antitrust Division began to raise questions, even as it acknowledged the overall pro-competitive benefits of the 3G Patent Platform. The Division's staff had two main concerns: (i) that the Platform, originally designed to work across all five radio interface technologies, would restrict competition (by restricting royalty rates on patents) in what the Antitrust Division perceived to be the continuing competition among the radio interfaces, and (ii) that the Platform would allow the exercise of monopsony power by licensees to lower royalty rates.

In response, the 3G Patent Platform Partnership argued that in the real world the path dependency from 2G to 3G had pretty much eliminated any competition among the radio interface technologies among operators, and that equipment makers had a demand derived from the operators' requirements. Even if some small amount of technology competition among the radio interfaces really did exist, a common standard royalty rate and maximum cumulative royalty rate would have so small an anti-competitive effect compared with all the other attributes of the differing technologies that it would be totally outweighed by the pro-competitive advantages through the efficient reduction of transaction costs and delays to implementation of innovative technology. As to the theoretical 'buyers cartel' concerns, it was pointed out that the Platform simply would not work unless patent holders were convinced that they were getting a competitive deal; indeed, without the active acceptance by patent holders of the Platform, it would not begin even to function, and one could with assurance rely on the patent holders to resist any theoretical buyer power of licensees. Five platforms, instead of one, would mean some loss of efficiencies, even if certain common administrative functions could be rendered across all five platforms.

Nevertheless, the two concerns of technology competition and licensee power, coupled with the Antitrust Division's historical reluctance about any balancing of pro-competitive and anti-competitive aspects of coordinated action in Business Review Letters (even when the facts would not be sufficient to warrant a suit to restrain the conduct under a rule of reason analysis), ultimately required the revision of the Platform. The revised Platform now provides for five independent Platform Companies (one for each radio interface technology), the elimination of licensee action within a Platform Company on the royalty rate and the maximum cumulative royalty rate, and the beefing up of governance provisions to avoid any improper licensee control or spill-over effects. Certain common administrative functions were deemed acceptable, and will be performed for all of the five Platform Companies by a Common Administrator and by an Evaluation Service Provider.

As the Justice Department's press release put it: "The Department assented to the proposal after the 3G Patent Platform Partnership agreed to make substantial modifications to address the Department's competitive concerns. These modifications principally involved the separation of the original proposal's single patent platform into five largely independent platforms, one for each competing 3G wireless technology…According to the Department's business review letter, the patent platform arrangements likely would not impede competition, since each platform would include only the essential patents related to a single 3G technology. The limited shared functions amongst the five platforms would exclude competitively sensitive activities, such as setting royalties for standard licenses, and would preclude the sharing of competitively sensitive information. No patent holder would be compelled to join a platform if it did not have its patents evaluated or received licenses under the platform terms. Licensors and licensees would remain free to negotiate independently to license 3G technology rather than using standardised platform arrangements."

The actual Business Review Letter, dated November 12, 2002 and addressed to Ky P Ewing, Jr as counsel (available on the Justice Department website), after setting out the structure and membership, and describing the evaluation process, analyses the revised platform against traditional US antitrust principles. It notes the differences from prior patent pooling arrangements that bundled all complementary patents whether the licensees wanted the full bundle or not, and concludes: "[I]t appears likely that the Platform arrangements described are not likely to impede competition and could offer some integrative efficiencies for users of the various 3G interface standards…The proposed arrangement is likely to facilitate the availability of complementary patent rights related to each of the five 3G standards, and could lower search and transaction costs for manufacturers and service providers who need access to these patent rights in order to provide 3G products and services."

The European Commission's comfort letter, dated November 11, 2002 and addressed to Alan Hoffman, as counsel in Europe, was brief and, in accordance with normal Commission procedure, unpublished. It did appear from the press release issued the next day that ultimately the Commission shared the Department's main concerns until they were met by the revisions. Significantly, however, the letter was a 'negative clearance', meaning that no anti-competitive effects could be detected in the definitive arrangements sufficient to require an exemption from any restriction of competition within the meaning of Article 81(1).

All's well that ends well

The 3G Patent Platform, as revised, is now being implemented under Director General Brian Kearsey (Tel: +33 1 34 59 08 63; Web: *www.3Gpatents.com*). Its success, of course, depends on the extent of its actual use by patent holders who believe they possess patents 'essential' to the 3G standards. Time will tell whether the promise of the Patent Platform will materialise. But at least we know that the major competition agencies are ready to coordinate their investigations and give their assent to innovative new ways of dealing with tough patent and competition issues, albeit on a very conservative basis.