Smartphone wars and European competition law

The smartphone IP wars have captured many newspaper headlines. If the companies involved are not careful, they may also soon attract the attention of European competition authorities

By **Natasha Kirk** and **Stephen Whitfield**

Today, the battle is moving from one of mobile devices to one of mobile ecosystems, and our strengths here are complementary. Ecosystems thrive when they reach scale, when they are fuelled by energy and innovation and when they provide benefits and value to each person or company who participates. This is what we are creating; this is our vision; this is the work we are driving from this day forward.

There are other mobile ecosystems. We will disrupt them.

Stephen Elop and Steve Ballmer, chief executives of Nokia and Microsoft respectively, think that they have an answer to the commercial challenges of smartphones and mobile internet technology. Their open letter of 11th February 2011 highlights the importance of integrating hardware with operating systems, applications and cloud-based services to provide a seamless experience for consumers. It also highlights the importance of undermining the attempts of competitors to achieve the same results.

The smartphone industry is complex, but relatively concentrated; highly lucrative, but costly to enter. It has great profit potential for the future and is characterised by the presence of a vast network of IP rights at every level of the production chain. Fairly small numbers of powerful, well-capitalised and well-funded companies compete aggressively with each other for supremacy in operating systems, software and handset technology, both through commercial means and through the robust enforcement of patents and other IP rights against potential threats to their market position.

Companies in this industry are competing with each other in the face of a now-traditional technology market narrative. If smartphones are predominantly online devices, then it could be that the smartphones market will start to resemble a whole range of other online markets. Search, social networking, auctions, retail – all of these markets began with a chaotic, creative rush of start-ups and entrepreneurs implementing different business and revenue models; but all have eventually coalesced around a small number of major players.

In such consumer-oriented markets – where participants regard almost any commercial strategy as legitimate, and where competition could well turn out to be for the whole market, not within the market – competition law regulators around the world will be watching events unfold with interest.

What's in a smartphone and why does it matter to competition lawyers?

There is relatively little variation in the underlying and fundamental principles of competition law around the world. However, the specific application of those principles changes from industry to industry. Competition law remedies in the banking sector will not always resemble competition law remedies in the pharmaceuticals sector, for the simple reason that companies in those industries compete for business in different ways, using different strategies.

So with that in mind, before looking at potential competition law issues in the smartphone industry, it is important to look

What are the principles of European competition law?

Competition law in Europe regulates commercial conduct using three main instruments, each of which could be relevant to companies in the smartphone sector.

Anti-competitive agreements
Article 101 of the Treaty on the Functioning of the European Union prohibits agreements that restrict, prevent or distort competition between EU member states. Distribution arrangements, patent licences, settlements of litigation and other more informal types of agreement could infringe Article 101, depending on the circumstances of the case.

Abuses of dominance
Article 102 of the Treaty on the Functioning of the European Union prohibits conduct that amounts to the abuse of a dominant position. The two key questions in relation to the application of Article 102 are whether a company is dominant in the relevant market (as a general guide, dominance may arise at market shares of around 40% or more) and whether the conduct in question abuses that dominant position. There is no fixed list of abuses; however, where a company occupies a dominant position within a market, it has a special responsibility not to allow its conduct to impair genuine undistorted competition within that market. For example, under certain circumstances a dominant company should not refuse to license patents which are essential to an industry standard, charge excessive prices for its products or enter into long-term exclusive arrangements with trading partners.

Merger control
The European Commission Merger Regulation (139/2004) governs a range of cross-border mergers, acquisitions and joint ventures. Those deals which significantly impede effective competition on a relevant market could be prohibited or, more usually, subjected to behavioural or structural remedies designed to address any competition issues.

EU member states also have more or less equivalent laws achieving the same objectives within a specific national territory. Each of those laws could apply to companies in the smartphone sector when they defend their IP rights or engage in other commercial strategies to strengthen or exploit their market positions.

at its economic structure and the nature of the products.

As Elop and Ballmer usefully pointed out in February, it is now better to view smartphones and related products as mobile ecosystems, rather than mobile devices. So what goes into the typical smartphone; how does it connect with its environment; and how is each segment of the industry structured?

Hardware

Handsets themselves come in a variety of forms, although they typically involve touchscreen capability (surrounded by a large number of patents and often subject to infringement litigation); some also involve QWERTY keyboards, and issues such as battery life, screen resolution and dimensions of the device are all relevant to the commercial success of the hardware. This segment of the market has been characterised in recent years by the entry of Chinese and Taiwanese manufacturers, such as HTC, as branded manufacturers, which previously produced devices for other mobile phone companies.

Phone and text capability

These functions may be overlooked, but smartphones still need to be capable of making phone calls and sending texts. A wide range of highly technical standards govern telecommunications in Europe, administered by the European Telecommunications Standards Institute and the Third Generation Partnership Project. Manufacturing devices which conform to these standards entails the licensing of a vast amount of intellectual property from a wide range of rights holders and/or patent pool administrators. Major patent holders in this space include Nokia and Qualcomm.

Operating system

Operating systems have become a major battleground in the smartphone wars. They control the functioning of the smartphone device and – perhaps more importantly in terms of revenue streams – they set the parameters of access for applications and other services. They can be proprietary or open source, or a mix of the two. Each major company in the smartphone space has needed to make crucial decisions about operating systems in recent years. Perhaps to ensure the widest possible distribution for its own operating system, Google has opted to release the majority of the Android source code on an open source basis and license it accordingly. By contrast, Research In Motion (RIM), manufacturer of BlackBerry smartphones, has chosen to vertically integrate and produce its operating system solely for use in its own devices. There can be commercial advantages and disadvantages to each of those approaches.

The major operating systems in this space include Nokia's Symbian (37% share of the global market, according to Gartner's third-quarter 2010 report), Google's Android (26%), Apple's iOS (17%), RIM's BlackBerry (15%) and the Windows Mobile platform (3%). There is every possibility that this space may become more concentrated as the alliance between Nokia and Microsoft takes shape. However, new entry is also possible, as the strategic importance of operating systems has led

handset manufacturers such as HTC to reportedly consider launching or acquiring their own systems.

Services
A large number of consumers use smartphones as devices to manage their personal and business lives. Web browsing capability, productivity services such as synchronised calendars and contact books, and even cut-down versions of word processors, PDF viewers and spreadsheets all contribute to the PC-like nature of the device. Maps and GPS systems could also fall into this bracket. A range of smaller companies compete with some major multinationals and handset manufacturers in this space.

Apps
From a consumer perspective, probably the single biggest development in smartphones in recent years has been the growth of the applications which can be downloaded onto a mobile device. Covering everything from shopping to travel, business, entertainment and games, apps are small, flexible and either free or generally relatively inexpensive. This is one of the very few sectors of the industry in which it is hard to pick out a single or a small number of major companies. That said, the operating system manufacturers act as gatekeepers to app stores, meaning that market power in operating systems can confer a significant amount of market power in apps at the retail level.

From a competition lawyer's perspective, the structure and nature of the market are significant. Smartphones combine, or bundle, previously independent goods and services into a single product. Some of those products are bundled with the phone and the mobile operator's contract (eg, maps or email synchronisation); others entail additional charges. Pricing and licensing decisions are similarly flexible across the industry at all levels of the supply chain — proprietary licensed products such as Windows Mobile compete directly with open source products such as Android. The nature of revenue generation also varies, from licensing fees in the case of essential patents for telephony to a mixture of subscription and advertising (eg, Spotify), and including the kind of revenue-splitting arrangement which Apple has intended to put in place for media content.

Traditionally, issues such as bundling and pricing — especially when combined with companies that possess significant market power — have created competition law problems. However, competition law generally works most effectively and predictably in markets where a small number of business models are operated by most of the participants. In the fledgling smartphone industry, this is not the case; and competition law regulators will need to tread very carefully in analysing these markets, in order that enforcement action does not conclude with the suppression of valuable, consumer-friendly innovation.

Competition law and smartphone wars
The smartphone sector is new and dynamic; therefore, there is very limited case law for competition regulators and lawyers to apply by way of clear precedent. However, in terms of competition law issues which are likely to affect smartphones, parallels can be drawn by looking at similar industries — in particular, those industries where the value of the products is fundamentally associated with IP rights and where competitors often play for very high stakes (ie, for the whole market).

In Europe, industries with those features that have been frequently and recently investigated include pharmaceuticals and electronics. A review of the case law and regulatory decisions in these sectors reveals some of the concerns of competition regulators in IP-rich sectors, covering the legal principles explained above. As will also be seen, competition regulators are just beginning to take an interest in smartphones.

Anti-competitive agreements
Article 101 of the Treaty on the Functioning of the European Union can apply to a wide range of agreements, although many of the issues raised — especially in the context of patent licences and distribution agreements — are already well known to legal counsel and commercial teams in technology companies. Less well known is that Article 101 can apply to settlements of litigation. In the context of the maelstrom of patent litigation which is surrounding the smartphone sector at the moment, this is an issue worth looking at in more detail.

Settlement agreements are, of course, a commercial necessity: they can reduce costs and provide parties with an alternative, less commercially perilous way of resolving litigation. However, they remain agreements between actual or potential competitors and as such are subject to the competition rules.

While there are very few helpful precedents, the European Commission, in the context of its recent investigation into the pharmaceuticals sector, clearly formed the view that settlements can be anti-competitive

and could potentially infringe Article 101. It has launched a number of investigations into settlement practices against companies in the pharmaceuticals sector and clarification of the law can be expected in the next few years. However, even at this early stage, some elements of settlements could be considered to increase the risk of infringement from a regulatory perspective.

In cases where it is clear that the underlying intellectual property was invalid or not infringed, a settlement agreement containing restrictions between the parties may be regarded as an attempt to restrict competition and an infringement of Article 101.

However, other settlement situations could also raise competition law issues. Without committing itself to a definitive view on the issue, the European Commission's inquiry into the pharmaceutical sector described the common situation in which one of the parties holds patent rights and the other party develops a product which it believes to be non-infringing. A dispute can arise at a relatively late stage in the development process, and a settlement in those circumstances can involve the grant of cross-licences necessary to allow each party to develop and commercialise its respective products free from the threat of infringement proceedings.

From a competition law perspective, if such settlements contain provisions that one of the parties will act as distributor for a separate product in return for not entering specific markets, or if entering the market is conditional on entry as a licensee subject to geographic or customer restrictions, the result could be an artificial territorial partitioning of the European Union — that is, carving up the territory on a member state basis — and an infringement of Article 101.

Abuses of dominance: patents

IP owners can occupy powerful positions in the smartphone industry by virtue of owning essential or strategically important patents for a wide range of components within the mobile ecosystem. It is only natural that they should wish to defend those patent rights, enforce them, use them to establish strong positions within a market and consequently extract as much value from them as possible.

However, ownership of IP rights does not exempt a company from the application of competition law. Here, the European Commission's experience in the electronics sector could well inform any future interventions in the smartphone sector. Two recent cases highlight the point that competition law can place limits on the exercise of IP rights where the rights holder occupies a dominant market position.

So-called patent ambushes can infringe Article 102 of the Treaty on the Functioning of the European Union, as the recent European Commission investigation into Rambus demonstrates. The commission took the view that Rambus had abused a dominant market position in relation to DRAM chips by not disclosing to the relevant standard-setting organisation the existence of certain patents for the standard in DRAM chips. Rambus later claimed that these patents were relevant to the standard, then charged unreasonable royalties and asserted these patents against manufacturers complying with the standard, an act which the commission said amounted to a patent ambush. Rambus

The battle for supremacy – what is at stake?

Companies in the smartphone space can fight the battle for supremacy using a range of strategies. They can invest in R&D to improve the quality of their mobile ecosystem (or their part of it); they can compete with each other on price or through other means to grow market shares; or they can engage in the robust enforcement and defence of their IP rights. However, these sorts of strategies are not usually particularly appealing, unless a market is profitable enough to be worth the investment of time and resources that they entail.

The smartphone industry has certainly become characterised by regular, large-scale patent litigation and fierce commercial competition for market share. So what is it about this industry that has made so many firms so pugnacious? Two features of the market can help us to understand this phenomenon.

Growth of the smartphone industry

Smartphones have revolutionised the consumer experience of electronic devices. According to Gartner, in 2010 global smartphone sales increased by 72% on the previous year and accounted for 19% of total mobile communication devices sold that year. Smartphone sales predominantly occur in mature markets such as Western Europe and North America (Americans are now more likely to purchase a smartphone than any other consumer electronic device), where competition is more intense, but where consumers should have reasonably high levels of disposable income.

A tendency towards monopoly or oligopoly?

There is a chance that the smartphone market, like other internet markets, will tend towards monopolisation over time. Professor Tim Wu of Columbia University, now also a senior adviser to the Federal Trade Commission in the United States on competition issues which affect internet and mobile markets, made this point in a recent column in the *Wall Street Journal*. He noted that while "the Internet has long been held up as a model for what the free market is supposed to look like – competition in its purest form", in fact, it looks increasingly like a Monopoly board. Professor Wu pointed out: "Most of the major sectors today are controlled by one dominant company or an oligopoly. Google 'owns' search; Facebook, social networking; eBay rules auctions; Apple dominates online content delivery; Amazon, retail; and so on." The logic should be clear – if mobile ecosystems are driven by their online components, then smartphone markets might also be subject to monopolisation or (more likely) oligopolisation over time.

The combination of these two factors might lead a company to conclude that decisive action should occur sooner rather than later, in the form of the enforcement of IP rights, bold joint ventures such as the Nokia/Microsoft link-up or assertive retail strategies.

In other words, the risk of failure is potential elimination from the market. But in a relatively concentrated industry, where a small number of big players are fighting it out for slices of some very lucrative markets, the risk of legitimate commercial conduct spilling over into potentially anti-competitive arrangements is clear and substantial.

Action plan

Taking account of competition law issues at an early stage can help businesses to deal with risk and explore potential strategies for commercial negotiations:

- **Understanding the market** – competition law assessments often rely heavily on defining relevant markets and assessing market shares. While this is predominantly a legal and economic exercise, a business should keep an eye on its market shares as they are typically defined in the industry. Shares approaching 40% could indicate a higher level of competition law scrutiny.
- **Settlements of litigation** – particular attention should be paid to settlements where the validity of the underlying intellectual property is in doubt, or where the terms of the settlement allocate specific territories or customer groups in Europe between the parties.
- **Patent enforcement** – be careful to ensure, especially where a patent is essential to an industry standard, that licence negotiations have included offers on fair, reasonable and non-discriminatory terms.
- **Dealing with powerful trading partners** – consider using competition law to leverage a better deal from powerful trading partners. Is it possible that a company is dominant and abusing that dominant position?
- **Merger control** – a wide range of deals outside straightforward share acquisitions can trigger mandatory merger control requirements. A preliminary merger control analysis in the case of joint ventures, outsourcing arrangements and long-term licensing arrangements can help to avoid delays to the deal timetable and additional costs at a later stage.

was compelled to reduce its royalties so that it charged only a fair, reasonable and non-discriminatory (FRAND) royalty rate.

Refusals to license can also constitute infringements of Article 102. In 2007 the European Commission opened formal proceedings against Qualcomm in order to investigate whether it was abusing its dominant position in connection with patent rights relevant to the mobile phone 3G standard for European mobile phone technology. In particular, there were allegations that Qualcomm refused to license essential patents to rivals on fair cost terms; did not observe its FRAND obligations; unfairly inflated royalties to a level which was claimed to be "excessive, disproportionate and unreasonably high" by virtue of the presence of Qualcomm's intellectual property in the relevant standard; and offered lower rates to phone makers that bought chipsets exclusively from Qualcomm. The case was not brought to a conclusion by the commission; however, many of the legal principles raised are now enshrined in its new guidance on standard-setting agreements.

Abuses of dominance: retail and distribution

The more powerful that a company becomes, the more likely it is to be able to influence downstream market conditions. If a company reaches a dominant market position under European competition law, it becomes subject to the special responsibility described above and its commercial freedom is curtailed to some extent.

It appears that companies in the smartphone sector are beginning to realise that competition law could offer them potential strategies for dealing with powerful trading partners, and that regulators may be interested in taking a closer look at those issues. A recent news story illustrates this point.

In February this year it was reported that certain publishers were trying to persuade competition law regulators in Europe and the United States to investigate Apple's planned subscription charges for mobile content supplied through iPhone or iPad apps. Apple has insisted on a 30% cut of payments for newspapers and other publications which are downloaded to those devices. Using a similar model, Google intends to charge a 10% fee for the same service, which is cheaper than Apple's and also less restrictive in its other commercial terms. However, some companies had criticised both the 10% and the 30% fee levels as excessive and likely to stifle innovation by publishers in the provision of online content. If competition regulators do decide to look at this issue in the context of Apple's business practices, they are likely to be considering, among other things, whether Apple is dominant and whether its fee levels are so excessive as to amount to an abuse of a dominant position.

Merger control

Sometimes if you can't beat them, you should join them. Nokia's recent alliance with Microsoft could potentially fall into this category, and HTC's deliberations over producing its own operating system indicate that there is a great deal to be said for some form of vertical integration in this industry. In the case of Nokia/Microsoft, there does not yet appear to be any suggestion that merger control approval would be required in order to implement the deal; but many joint ventures in the technology sector have been examined by the European Commission and companies would be well advised to consider whether initiatives at the corporate level could trigger notification requirements, as notification can be a costly exercise and delay completion by a number of months, depending on the circumstances.

A good example from a related online sector concerns the European Commission's investigation of the Microsoft/Yahoo! search business transaction last year. In that case the European Commission investigated and ultimately approved the acquisition by Microsoft of a 10-year exclusive licence to Yahoo!'s search technologies. As part of the deal, Microsoft intended to hire Yahoo!

internet search and search advertising staff, and would have become the exclusive internet search and search advertising provider used by Yahoo!. The commission looked at the parties' market shares in online search and also examined the potential impact of the deal on consumers, advertisers, online publishers and distributors of search technology in order to understand whether it would significantly impede effective competition on the market.

Take care over IP enforcement

What lessons can companies in the smartphone industry learn from the types of competition law issue outlined above? First, regulators are prepared to intervene in IP-rich, dynamic markets where they perceive clear risks to competition and where they believe that they can impose remedies which will address those risks. Second, cases are just beginning to flow through the regulatory process, with Apple under the microscope in Europe and the United States in respect of a number of its business practices.

In particular, unless companies in the smartphone sector take care over how they enforce their intellectual property, how they bring their disputes to an end and how they structure corporate deals with other companies in the industry, they may find out that winning the smartphone peace is harder than winning the smartphone wars. *iam*

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