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Apple, Samsung, Patents and Android

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A US jury has found Samsung infringed Apple's patents with Android products and awarded $1bn damages. This is 17% of Samsung's Q2 operating profit and would be crippling to any other Android OEM: it sends ripples of uncertainty through the ecosystem

We expect the verdict to accelerate IP licensing between Apple and other Android OEMs, with Apple (like Nokia and other IP holders) levying a fee per device, though Google's ownership of Motorola may mitigate this somewhat

However, major changes in the Android proposition are unlikely to be necessary, and as long as the iPhone ASP is $650 and Android is $300 or below, market share is unlikely to shift much. Absent a cheaper iPhone, Android will continue to outsell iPhone 3:1 at much lower prices, especially outside the USA

"Since Apple's paradigm of an advanced smartphone won, Apple's portfolio will become the most important and valuable part of the IP stack for the next decade"

– Apple presentation to Samsung, 2010

Apple has won a significant step in its proxy war with Google, with a US jury finding overwhelmingly in its favour in a patent infringement lawsuit related to Samsung Android devices and awarding it $1bn in damages. This remains subject to appeal, and also to the possibility of triple damages for wilful infringement. Apple is now seeking injunctions on the sales of eight devices.

$1bn is a relatively small amount of money for Apple, and even for Samsung it is 17% of Q2 operating profit. However, for any other Android OEM it would be crippling and possibly fatal.

We draw four conclusions from this verdict:

- Google and Android OEMs will try harder to make sure that their products are clearly different from Apple products
- The current round of reciprocal lawsuits will shake out with Android OEMs paying fees to Apple, Nokia and Microsoft, perhaps through a 'cleared' version of Android offered by Google
- Android OEMs will take a second look at Windows Phone, but RIM's efforts to license its BB10 platform are unlikely to be helped
- However, the underlying balance of market share in the industry will almost certainly not change, since the driving dynamic is the wide price gap between iPhone and other devices, which this will not materially alter

Patents and Android differentiation

Three sets of intellectual property were covered in the lawsuit:

- Samsung's own modifications to Android, which Apple argued had the effect of making it more similar to the iPhone
- Samsung hardware design, which Apple (and Google, according to court papers) argued was too similar to the iPhone
- Three underlying Android features that Apple claimed patents on, covering aspects of 'inertia' scrolling, multitouch and tapping to zoom

Apple won clear victories on all of these points.

Going forward, it is relatively straight-forward for Android OEMs to avoid the first and second issues, and indeed most Android hardware now looks noticeably different to the iPhone. This includes the current Samsung smartphone flagship, the Galaxy S3, which it has been suggested shows signs of being designed deliberately to avoid Apple design patents.

The more difficult issue is those patents that relate to Android itself and to basic ways to use your finger to interact with a mobile phone touch screen, which Apple was after all the first to commercialise at any scale. In those instances OEMs are largely dependent on Google to make any changes.

Google has already to some extent redesigned newer versions of Android to reduce any risk of infringing the three specific patents asserted in the Samsung case. Of course, all OEMs continue to ship significant numbers of devices running older versions of the OS, which may well still contain features that have been found to be infringing.

However, Apple has more than just these three patents: it chose those that would be easiest to prove against Samsung. In a presentation to Samsung in 2010, Apple listed 76 'example' patents that it claimed Android infringed. Clearly these will vary in strength and in how easy it is for Google to design around them, but Apple may use all of them, and it still has patent lawsuits outstanding against several other Android OEMs.

Patent license fees

The mobile handset industry runs on patents, with all participants accumulating them and licensing them to each other in a complex web of negotiations, 'patent pools' and occasional litigation. To simplify hugely, companies with a long history in the industry will pay relatively little to each other on a net basis, but newer entrants must make payments to the companies that collectively invented GSM and other standards.

Hence, Apple itself is paying net patent licensing fees to Nokia, based on a settlement in June 2011. The terms of this have not been disclosed, but were reported to be in the region of $600m as a one-off fee plus a royalty per device of perhaps $10 per iPhone. Nokia has signalled that it will take a more aggressive and systematic approach to making money from its IP, which will probably also result in fees from Android OEMs.

Most international Android OEMs already pay patent license fees to Microsoft for each Android device that they sell, including HTC, ZTE, Samsung, as do the ODMs Compal, Quanta and Wistron. It has been reported that HTC's license fee to

Microsoft for each Android device is $5, and that this is actually larger than its fee for Windows Phone devices.

Motorola

This was the context for Google's acquisition of Motorola Mobility, which was announced in August 2011 and closed in May 2012. Google paid an enterprise value of $9.6bn, of which $5.5bn was for 'patents and technology'. When the acquisition was announced, it was generally suggested that Google would try to use these patents to offer an 'umbrella' to Android OEMs, fending off patent assaults from Apple and others. Conversely the Motorola CEO, Sanjay Jha, had publically stated an intention to use Motorola's own IP to collect royalties from other Android OEMs.

In principle, Google could now extend to Android OEMs the same patent position that Motorola itself was in, which would reduce their net payments to other patent holders. However, it is unclear how much leverage these patents give Google over Apple. It has been argued that the great majority of Motorola's patents are so-called 'essential' patents, meaning that they are needed to make, for example, any GSM phone. As such Motorola is obliged to license them on a 'fair, reasonable and non-discriminatory' basis (FRAND). This means that Google may not be able to charge Apple more than it would have charged anyone else as leverage to extract concessions from Apple on, for example, inertia scrolling.

Settlement and licensing

Apple's patents are not subject to a FRAND requirement, and while it is clearly not willing to issue licenses for its design patents (i.e. handsets to look like the iPhone), it is willing to license most of the rest of its patents (though exactly what remains unclear). In 2010 Apple offered Samsung patent packages at a rate of $20-$30 per licensed smartphone and $40 for tablets, reducing to $30 after two years. Clearly this was an opening negotiating position, but it points to the nature of Apple's ambitions. (For comparison, the US court's damages of $1bn for the 22.7m infringing units that were sold in the USA equates to $44 per device.) We would expect Apple to withhold patents that relate to unique parts of the 'look and feel' of the iPhone, but not others.

It is also conceivable that this comes in the context of a version of Android that Google itself 'clears' with both Apple and other relevant IP holders, such that the increasing number of smaller Android OEMs can pay Google a fee for IP cover. Of course, such an outcome would have the effect of increasing Google's control over the Android ecosystem, a prospect it may not be that unhappy about.

Alternatives for OEMs: Windows Phone and RIM?

"Windows Phone is looking goooooood right now."

Bill Cox, Director of Marketing Communications for the Windows Phone Division at Microsoft, on Twitter after the patent verdict

Windows Phone is obviously available for use by handset OEMs today, and RIM has suggested licensing its next platform, BB10, when it is available early next year. Unlike Android, both of these come with indemnification from Microsoft and (presumably) RIM, meaning OEMs would not face the same legal risk.

There is certainly an increase in OEM interest in Windows Phone; Nokia managed to sell 'over 4m' units in Q2, Samsung released a new flagship device at IFA in

Berlin on 29 August and many OEMs are launching Windows 8 tablets. However, Windows Phone still struggles to show an app ecosystem as strong as iOS or even Android, and because of that consumer sales continue to lag. We would expect OEM investment in Windows Phone to be driven far more by evidence of consumer demand than by patents.

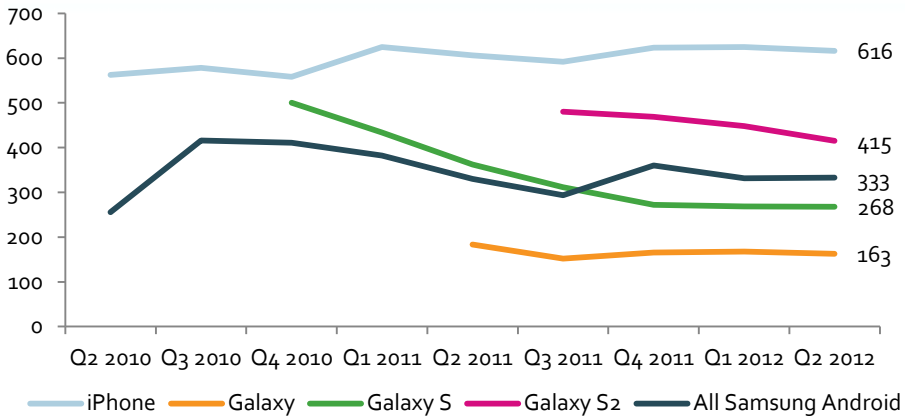
This point also applies to BB10. Windows Phone is at least in the market and is selling units; BB10 has not yet launched and has a no ecosystem at all as yet. We would expect OEMs to invest only if it shows traction with RIM devices in 2013.

Impact on market share and the platform wars

In our view the key issue driving relative market share between Apple and Android is handset price. Apple sells iPhones for an average of $650: no Android OEM achieves an average of more than $350, and much of the growth in Android is towards the sub $200 (and even sub-$100) price point. In effect, Android outsells Apple three to one at a half to a third of the price.

This is true even in the USA, where high contract prices and high subsidies tend to mask the iPhone's price premium (we discussed this in detail in ***iPhone passes 50% smartphone share in the USA [2012-053]***) and it has a 50% share of smartphone sales. Samsung reports an average selling price half that of Apple, and even its premium devices achieve an ASP not far above Apple's discounted iPhone 3GS, which sells for $375 before subsidy.

US market ASP ($)



[Source: Apple, Samsung, Enders Analysis]

As discussed above, it is not clear quite where the total royalty bill for an Android phone will end up, but it is nonetheless clear that it will not be large enough to affect the difference between a $300 handset and a $600 handset.

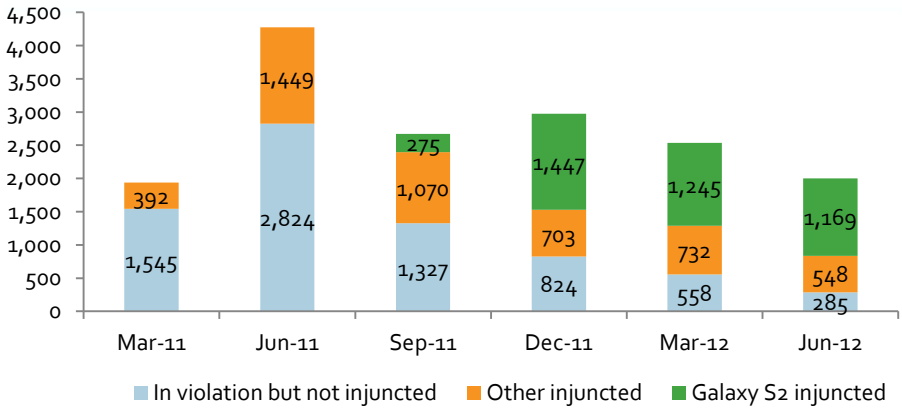
On the other hand, the addition of royalties to a $75 Android handset, a fast-emerging segment, could have a very material impact on its profitability. The key issue will be the extent to which the royalties agreed are levelled on an absolute or percentage basis (though many vendors making low-end devices for emerging markets do not make a habit of paying license fees). Should this go the wrong way, the growth of Android in prepay segments, which includes about half of Europe and most of the developing world, could be slowed. However we do not

expect its current share to be reversed, as the iPhone will still be nowhere near the price needed to be a viable alternative.

The verdict and the impact on Samsung USA

Apple is now seeking an injunction on sales of eight Samsung smartphones. The hearing for this has been set for 6 December. Samsung has disclosed historic unit sales of these (shown below): in total they sold 1.7m units in Q2 for $605m. Some of these are approaching the end of their life but the four Galaxy S2 variants covered sold 1.2m units in Q2 and are still selling strongly.

US unit sales of phones covered by lawsuit (000s)



[Source: Samsung, Enders Analysis]

Samsung has not disclosed total unit sales (i.e. including other handsets not included in the lawsuit), meaning Galaxy S3 sales are not included in this chart. The S3 went on sale in June 2012 and Samsung stated it sold 10m globally in the first two months.

We estimate that total US market smartphone sales in Q2 were 16.8m units, of which 8m were iPhones and almost all the rest Android: hence the handsets that Apple is seeking to remove from the market had 10% of the market. This will shrink further by the time of the court hearing in December, and we would not expect their removal to have a major impact on US market share.

Conclusion

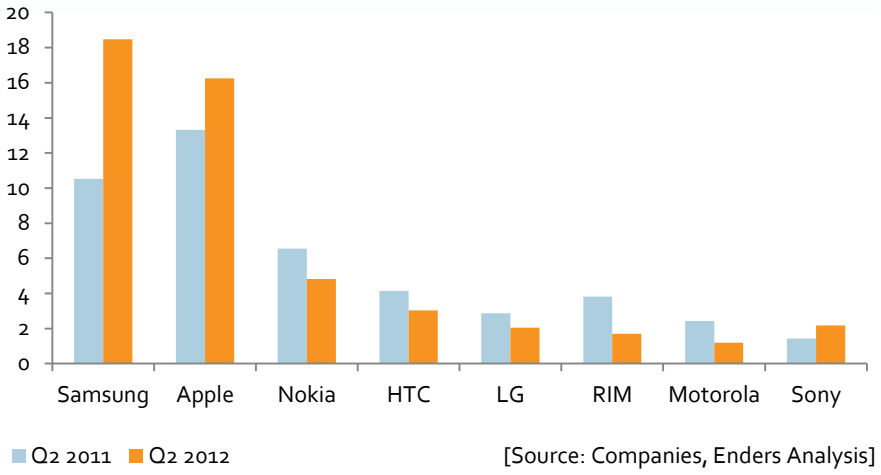
"All this time we've been paying all our attention to Nokia, and concentrated our efforts on things like Folder, Bar, Slide, yet when our user experience is compared to the unexpected competitor Apple's iPhone, the difference is truly that of Heaven and Earth."

JK Shin, head of Samsung Electronics' mobile division, internal meeting in 2010

This verdict will reinforce Apple's message that, in Tim Cook's phrase, "We just want people to invent their own stuff". Yet most Android OEMs are already trying hard to make unique hardware designs, including Samsung, and Google has already removed some of the infringing elements from Android. To some extent, then, Apple had got what it wanted before the verdict was in.

Meanwhile, it has relatively little impact on the broader handset landscape. As we argued in ***Mobile platforms update, Q2 2012 [2012-083]***, the handset market is polarising between Samsung and Apple (and arguably Nokia) as scale players and Chinese vendors with cost advantages: the other branded OEMs are caught in the middle and appear increasingly subscale.

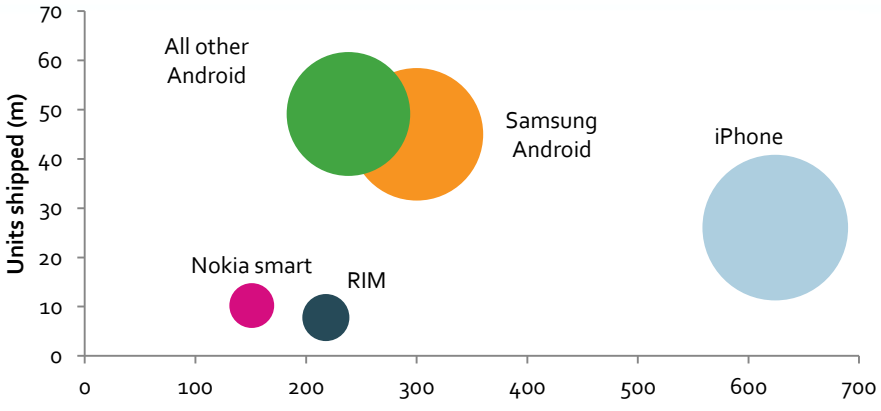
Handset revenue ($bn)



[Source: Companies, Enders Analysis]

Meanwhile Android unit sales continue to run at two to three times the rate of iPhone, driven by a wide price gap.

Q2 2012 global smartphone business



Bubble size = revenue [Source: Companies, Enders Analysis]

License fees and redesigns will impose further costs on Android OEMs and slow them down a little, but the key drivers of the market are elsewhere. A $300 iPhone, or indeed a $300 iPad, would change things far more than a $1bn fine.

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