HARGREAVEHALE

INVESTMENT BULLETIN

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Speed Dial Growth: Mobile World Congress 2010

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It was my privilege once more to visit the Annual Mobile World Congress in Barcelona, which is the biggest trade fair, certainly in Europe and probably in the world, for industry players in and around the mobile telecommunications industry. These include handset manufacturers, mobile network operators and software and other service providers, with 1300 exhibitors present. Anybody who is anybody in the industry is at MWC, with the notable exception of Apple, which holds its own show.

The mobile telecoms industry still represents one of the greatest growth opportunities for investors today, despite the developed nature of mobile phone penetration in developed Western markets, some Arab countries and even South Africa, where 100%+ levels are now not uncommon.

A key feature of MWC 2010 was how much better attended and more dynamic it was than the fair of the previous year. This not only came through anecdotally in discussions with exhibitors, but also from the fact that 2009's numbers had apparently been matched by the end of the morning of 2010's third day (out of four).

There are now c.4 billion mobile handsets in use globally, with this number expected to rise to c.6 billion by 2013. This growth is largely underpinned by demand in emerging markets such as the BRIC (Brazil, Russia, India, China) countries and Africa.

A testament to the true growth nature of the mobile industry is that, despite the global financial crisis, global demand for voice and especially data bandwidth and network capacity continues to push the limits of network infrastructure. This is not just a localised story in emerging markets such as Africa's 50% growth rate and still low c40% handset penetration (many mature markets are c100%+). The engine of growth globally is **data,** not voice.

A key driver of data consumption in developed markets is the **smartphone,** which are the higher end handsets such as the Apple iPhone, Blackberry range and top end Nokias. These devices offer users a range of wireless connectivity including internet access and grew at c27% in 2009, despite the general economic malaise. Smartphones enable users to email, surf the Web, 'instant message' friends, 'social network' through Facebook and Twitter and other sites, download music and video and do a host of other useful and entertaining things using computer programs on their handsets commonly known as 'apps' (for applications). Such has been the success of these '**apps'** that the iPhone (originally introduced in 2007) now boasts c.140,000 of them which can be downloaded over the air for free or for a charge, enabling the user to do anything from checking his stock prices to appearing to be drinking a glass of lager on his screen as he tilts back the device to 'drink' it.

The data-hungriness of smartphones and other devices is causing major headaches for the owners and operators of the mobile networks. Such has been the explosive growth in data consumption by mobile phone users that those customers of large operators such as AT&T in the US and O2 in the UK have

suffered significant drops in service levels due to congestion on the network. One quoted statistic suggests that only 3% of mobile phone users (on devices like the iPhone and Blackberry) are responsible for using c40% of network capacity.

Do not, however, underestimate the demand for data from emerging markets. Yes, smartphone prices are out of reach of the majority in places like Africa and India, but cheaper 'feature' phones and other devices are getting technology upgrades as prices come down and availability increases continually. Emerging markets mobile phone users have just as great a yen for Web surfing, instant messaging, email, and social networking as their developed world counterparts. Demand has another major driver not usually a factor in developed markets: the lack of fixed broadband availability, due to the often uneconomic case for laying down copper and fibre to towns and cities. In this way, the mobile phone in emerging markets is and will be the only gateway to the internet for most people, given the relative lack of relatively expensive and unavailable PC and fixed broadband penetration.

The headache for mobile operators looks set to get worse. The explosion in data demand shows no sign of abating, but many operators are still also waking from what has been around an 18-month crisis-induced moratorium on capital expenditure on their networks, making for an even bigger catch-up. In 2010, networks are expected to spend around $70 billion on upgrading their network capacity and infrastructure.

Major themes at Mobile World Congress 2010-02-22

The outstanding areas of interest in Barcelona I felt were as follows:

4G/LTE

4G or fourth generation is the generic name for the latest wireless cellular standard offering the highest data rates and representing a major progression from 3G data rates. There are different stripes and flavours of 4G technologies but the dominant technology is likely to be Long Term Evolution, where according to Altium Securities, average download speeds of c25 Megabits per second compare against a figure of just 1.1 Mbps for 3G. I saw demonstrated LTE networks offering up to 100 Mbps performance at the show. Clearly 4G offers substantial benefits in terms of download times and enhanced mobile user experience over 3G, especially in terms of music, video and applications.

Mobile Apps

Such has been the explosion and excitement around mobile phone applications that there was a dedicated hall at the Show, the 'App Planet', populated with software and service providers and some hardware players. There are serious industry efforts now to make it easier for software developers to write apps for non-Apple phones, such has been the success of apps on the iPhone. The apps market is mushrooming, it would appear.

Smartphones

The handset makers had a wide variety of existing and new smartphones to show off. Probably the most striking new launch was Samsung's Wave phone, featuring a new 'AMOLED' super bright and super sharp display. Motorola's range was also interesting, and this company is clearly determined to regain lost market share in recent times.

Android

Android is Google's mobile phone operating system and is proselytising disciples at a fast pace. It is 'open', unlike the operating systems from the likes of Apple and Microsoft, so enabling relatively free and easy development of software and functionality by independent software developers. Industry forecasts suggest that Android could be the no.1 mobile operating system in the next 3-5 years.

The Chinese Dragons: Huawei and ZTE

Watch out for the Chinese! The two network equipment vendors, Huawei and ZTE, were out in force at the Show, with Huawei commanding a huge separate building on the site for client interaction. Both companies are heavily subsidised by the government of the PRC and both have expanded up the food chain from network gear and infrastructure kit to making mobile handsets, often as 'white label' efforts for network operators. ZTE is the world's no. 6 handset maker now. These companies and especially Huawei, have been terrifying competition such as Nokia Siemens Networks with their aggressive pricing strategy and the level of technology at their disposal continues to advance.

How can UK investors play the mobile revolution? There are many roads to Rome…

The UK investor can play on the growth in mobile telecommunications in a variety of different ways, in different segments and with varying degrees of risk. Unsurprisingly, many of the companies mentioned below are high risk, on high valuations and high visibility is not usually a feature, so buyers must be especially risk-aware.

Here is a selection of obvious and more eclectic plays:

ARM Holdings, FTSE 100, 207p, £2.7billion market cap.

ARM dominates the market for high speed, high efficiency microprocessors in handsets and other mobile devices. ARM has c80%+ market share in handsets and its stock price has risen relentlessly on the back of smartphone growth as well as potential in the fast-growing netbook segment. ARM licenses its intellectual property and derives lucrative royalty income from each 'core' used in the phone. Smartphones use more cores than ordinary phones (five or more), thus giving ARM a 'multiplier' effect on its bottom line.

CSR, Mid 250, 504p, £914m market cap.

Cambridge Silicon Radio makes radio frequency chips using contract manufacture and is an acknowledged king of Bluetooth, a short range radio standard for pairing electronic devices. CSR is well respected and now has a broad array of RF products in Bluetooth and other standards such as WiFi, FM radio, GPS for location based services. The new CEO here has done a sterling job so far and the Group has an excellent opportunity in the GPS area, having made what is widely regarded as a shrewd acquisition in SiRF. CSR is a good play on smartphones, but also on other devices such as headsets, personal music players, automotive applications such as hands-free calling and PCs.

Spirent, Mid 250, 107p, £720m

Spirent makes and sells testing gear for wireline and wireless telecoms networks. Spirent is a good play on the shift to 4G/LTE standards, as well as growth in the wireline Ethernet network standard which is indirectly driven by the expansion in mobile telecoms. Discussions with a staff member were positive and Spirent claims to have a broader range of product than most of its rivals. Spirent looks a good play on the growing investment programmes of mobile network operators.

Imagination Technologies, Mid 250, 258p, £622m

Imagination has a similar revenue model to ARM, licensing its intellectual property for chips used to accelerate graphics, process routines and receive TV and other wireless signals in mobile (and other) devices. Imagination is widely regarded as the leader in graphics processing in terms of both efficiency and performance. Apple uses the technology and is a significant shareholder in the company.

Wolfson Microelectronics, FTSE Smallcap, 142p, £168m market cap.

Wolfson makes mixed signal audio chips, noise cancellation and power management systems not just for mobiles but for a whole range of consumer electronic devices. Wolfson recently pleased the market with evidence of much greater momentum in product design-ins and its technology enhances smartphone efficiency and user experience.

CAP-XX, AIM, 32.5p, £23m market cap.

CAP-XX is an Australian company which owns intellectual property to and manufactures thin form supercapacitors. These devices offer a highly efficient form of miniaturised power storage and delivery which is especially suitable for mobile wireless handheld devices. CAP-XX claims an enhancement of up to 20% to battery life, which is the major bane of many handheld devices, according to consumers.

Intelligent Environments Group, AIM, 9.25p, £15m market cap.

IE’s core business is software applications to facilitate online applications for credit and savings cards and has a strong band of banking customers. The Group has recently announced that it will roll out a mobile banking application for the iPhone, Blackberry and Android handsets. This banking app is thought to

supersede anything currently available in terms of depth and breadth of functionality for the end user; this is facilitated by the deep ‘hooks’ into banking back office systems that IE already has through its core software activities. The mobile banking market has been projected to grow to over €4 billion by 2013.

Guy Feld 22 February 2010
Investment Manager

Conflicts Disclosure: Guy Feld personally owns shares or has exposure to the following companies referred to above: CAP XX, CSR and Intelligent Environments Group.

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