Exploring new routes to innovation

Welcome to the 15th edition of Inside Telecommunications. Our quarterly sector review draws on EY’s deep industry expertise to provide unparalleled market intelligence of the critical issues impacting the sector around the world.

This issue considers a number of important themes, from new partnering needs spurred by the Internet of Things and smartphone growth opportunities in emerging markets to growing industry support for IPX technology and shifting internet governance models.

2014 has very much been the year of M&A in telecommunications, and transactions continue to underline a sector in transformation. Consolidation scenarios are playing out, with both Europe and Latin America witnessing significant levels of activity. The second half of the year has seen a number of tower sale-and-leaseback deals struck in Africa.

Against this backdrop, we hope you find this material useful. Please do not hesitate to share your feedback with me or any of my colleagues at EY.

Prashant Singhal
Global Telecommunications Leader
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The third quarter of 2014 has proved notable for the telecommunications sector in a number of ways. High levels of M&A activity, allied to operator announcements of new service launches, underline an industry in transition, while regulatory issues such as net neutrality continue to generate plenty of news flow.

Network migration strategies continue to be a focus area for operators the world over. With more than 330 LTE networks now commercially available in 112 countries, 4G investment levels are slowing and overall mobile capex is forecast to increase by 5.9% worldwide in 2014, below the growth rate posted in 2013.1

Nevertheless, network quality remains a vital differentiator. Last year, Vodafone committed to a £19b two-year network upgrade program and in October launched LTE-A, offering three times the data throughput of basic 4G services, in selected UK cities. In the same month, fellow UK player EE launched LTE-A while Telecom Italia has now made LTE-A available in 60 Italian cities.

Such moves suggest that first-mover advantage in mobile network upgrades remains a priority for leading players, yet it is vital that operators do not overlook the coverage levels of their legacy infrastructure. So-called coverage “not-spots” are now attracting attention both inside and outside the sector. In the UK, the government has published a consultation document showing that 20% of the country may be affected by partial “not-spots” — places where there may be a signal from one or two operators but not all mobile infrastructure owners.2

Figure 1. Partial “not-spots” by location in UK

<table>
<thead>
<tr>
<th>% mobile network non-coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premises</td>
</tr>
<tr>
<td>A Roads</td>
</tr>
<tr>
<td>B Roads</td>
</tr>
<tr>
<td>Landmass</td>
</tr>
</tbody>
</table>

Source: UK Department of Culture, Media and Sport via Ofcom

In order to address this issue, the UK government has proposed mandated national roaming. This proposal has provoked consternation among operators, with the GSMA subsequently highlighting that such a solution would be technically complex, expensive and could impede law enforcement activities.3 The global operator association instead sees spectrum charge reviews and reform of the Electronic Communications Code (ECC) — which governs operators’ land access rights — as more appropriate ways to improve coverage levels.

While localized roaming solutions have found favor in markets such as France, it is clear that there are divergent views among stakeholders on how best to tackle not-spots. Meanwhile, there are a number of reasons why operators may need to start prioritizing coverage not-spots. Quite apart from regulatory scrutiny, new mobile use cases involving machine-to-machine (M2M) connectivity will require more robust levels of geographic coverage.

Some vendors are already considering alternative technology solutions to provide better rural connectivity for the Internet of Things (IoT). Low power wide area (LPWA) public wireless technologies can provide high-reach, low-cost connectivity as well as long battery life for devices that only need to send and receive occasional messages.

Services such as connected car insurance, smart metering and security systems could all benefit from alternative technological approaches in an M2M setting. The read-across for mobile operators eager to monetize their existing network footprint for IoT services is clear: coverage levels require greater focus, and network quality is by no means a differentiator confined to high-spending consumers in urban areas.

2. “Tackling Partial Not Spots in Mobile Phone Coverage,” UK Department of Culture, Media and Sport, 5 November 2014.
Cross-sector collaboration helps unleash the Internet of Things

The Internet of Things (IoT) is fast becoming a reality in all regions worldwide. The use of connected devices and systems to leverage data from a range of physical objects is growing rapidly, transforming societies and economies in many new ways. The International Data Corporation (IDC) expects that technology and services revenue from IoT will expand from US$1.3 trillion in 2013 to US$3.04 trillion in 2020 with a compound annual growth rate of 13%. By the end of the decade, IDC expects to see nearly 30 billion connected devices worldwide, with all regions experiencing growth.4

Although the upside represented by the IoT remains highly promising – with use cases as diverse as home automation services, logistics tracking and pay-as-you-drive car insurance – plenty of challenges remain to be overcome if IoT is to live up to industry ambitions. Enabling global distribution and globally consistent service levels is no easy task, and already a number of horizontal operator alliances have been formed to tackle this, from the Global M2M Association to the M2M World Alliance.

Partnerships are very much the lifeblood of new IoT service propositions. Many leading carriers have well-established partner programs for machine-to-machine (M2M) and IoT. Verizon counts more than 400 partners in its IoT ecosystem, while more than 600 companies from 59 countries participate in Deutsche Telekom’s M2M partner program.5


This year has also seen operators strike new partnerships with a range of technology companies, from IT services providers to M2M platform specialists. In February, US-based AT&T announced a global alliance to develop IoT solutions with IBM, with the two companies set to target use cases in smart city and the utility industry while also building IoT testbeds around the United States as part of the “SmartAmerica Challenge.”

In April, Qatar-based Ooredoo signed a Memorandum of Understanding (MoU) with networking provider Cisco to collaborate on smart city, cloud and managed services solutions. Building on their existing strategic relationship, the two players will work together on smart city concepts, which form an integral part of the Qatar National Vision 2030.

In August, chip manufacturer Intel and Chunghwa Telecom announced a MoU through which they are to collaborate on technology innovation in IoT, cloud computing and software-defined networks (SDN). Smart home, energy management and fleet management services will be the focus of joint efforts, and the agreement builds on an MoU they signed in 2010 to collaborate on cloud computing. In September, software specialist Oracle revealed it was working with Vodafone to develop IoT systems.

Operators are also continuing to work with IoT specialists. Jasper Wireless already has more than 100 partner mobile operators that use its M2M platform, and in September it was selected by Telecom Italia Digital Solutions to support the Italian carrier’s IoT services for the automotive, air, rail and shipping industries.

Figure 3. Selected operator and technology company IoT partnerships

<table>
<thead>
<tr>
<th>Date</th>
<th>Telco</th>
<th>Technology partner</th>
<th>Service domain</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov-14</td>
<td>Tele2</td>
<td>L&amp;T Technology Services</td>
<td>IoT</td>
<td>The companies will work together to develop IoT solutions for the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>automotive, air, rail and shipping industries.</td>
</tr>
<tr>
<td>Sept-14</td>
<td>Vodafone</td>
<td>Oracle</td>
<td>IoT</td>
<td>Oracle is collaborating with Vodafone on IoT solutions, combining</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vodafone's mobile applications expertise with Oracle's cloud tools.</td>
</tr>
<tr>
<td>Sep-14</td>
<td>Telecom Italia</td>
<td>Jasper Technologies</td>
<td>IoT</td>
<td>Telecom Italia Digital Solutions has selected Jasper to power IoT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>for Italian and international enterprise customers.</td>
</tr>
<tr>
<td>Aug-14</td>
<td>Chunghwa Telecom</td>
<td>Intel</td>
<td>IoT, cloud, SDN</td>
<td>The companies signed an MoU agreeing to jointly innovate in a number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>of emerging areas. The MoU builds on an agreement signed in 2010.</td>
</tr>
<tr>
<td>Apr-14</td>
<td>Ooredoo</td>
<td>Cisco</td>
<td>IoT, cloud,</td>
<td>The companies signed an MoU to collaborate on the provision of smart</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>managed services</td>
<td>city, cloud and managed services to enterprise customers in Qatar.</td>
</tr>
<tr>
<td>Feb-14</td>
<td>AT&amp;T</td>
<td>IBM</td>
<td>M2M/IoT solutions</td>
<td>The entities will combine their analytics platforms, cloud and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>security technologies with a focus on privacy, targeting use cases</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>such as smart cities and smart metering. Target customers are</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>governments and utilities.</td>
</tr>
</tbody>
</table>

Source: Operator press releases and news reports cited in this publication.

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Italian and international enterprise customers. Tele2 has also been active with specialist IoT partners, striking deals with Cubic Telecom to speed M2M deployments in the automotive sector and L&T Technology Services with a view to addressing the transportation industry.

While a greater range of vertical partnerships is evident as operators target new industry-specific IoT opportunities alongside related opportunities in cloud and SDN, there has also been an uptick in bilateral operator partnerships and joint ventures. In October, China Mobile and Deutsche Telekom agreed to establish a joint venture to combine their expertise for the Chinese connected car market. Earlier in the year, SK Telecom formed an IoT partnership with Spark New Zealand (formerly Telecom New Zealand) to collaborate in areas such as smart cities and connected cars.

The expansion of the IoT partnering universe reflects growing confidence in the opportunities presented by connected devices. However, challenges are never far from the surface. The sheer complexity of the IoT landscape – with technology needs, customer demands and business models varying significantly according to use case – mean that operators will have to ensure their partnering frameworks become even more flexible.

For example, some carriers are now using more than one M2M platform special, meaning that even turnkey solutions from suppliers may not be enough. Moreover, while smart city and connected car opportunities are driving many tie-ups, some industry watchers would argue that more tangible revenue streams lie in the smart home space, where levels of disruptive competition are higher and where partnering models may find less favor.

Looking ahead, M&A offers an alternative route into the IoT market – and yet, apart from some high-profile deals in the automotive market, operators have been largely absent from deals designed to boost capability. Bolder moves via acquisition could bring in the vertical expertise and application development skills that would allow operators to grow their share of the IoT wallet well beyond the provision of connectivity.

While inorganic growth agendas in IoT are likely to continue developing in new ways for some time yet, there are other pressing priorities for carriers to consider. Many operators have refined their organizational structures in the light of long-standing orientations toward M2M, yet further changes may be needed as the world of IoT becomes increasingly entwined with analytics and cloud initiatives. At the same time, optimal market positioning may require a greater range of business models that can flex to support everything from white-labeling approaches to new imperatives in service pricing and packaging.

Operators ramp up innovation fund and accelerator programs

A number of operators worldwide are focusing on adopting new routes to innovation as competition from over-the-top (OTT) players increases and new service opportunities appear, such as digital advertising and the Internet of Things. Nurturing and acquiring start-up capability is more than a “nice to have” for many players; it is a mission-critical route toward new capabilities in an age where fresh approaches to service creation have never been more valued and improvements in time-to-market are vital.

According to one report, total investment by venture capitalists, private investors, corporate investors and equity groups in mobile internet start-ups stood at US$19.2b for the 12 months prior to October, with m-commerce, travel/transport platforms and utilities leading the way.

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In this light, operators are establishing new incubators as part of digital transformation initiatives that are also witnessing the creation of new business units and greater use of big data analytics. Existing venture capital initiatives are being overhauled, with incubators hinging on a more symbiotic collaboration between telcos and start-ups. In many cases, operators are working with partners as part of accelerator initiatives, underlining how service innovation is increasingly reliant on harnessing expertise from across the ecosystem.

A number of operators have announced new incubator initiatives in recent months. There was plenty of news flow early in the year, before and during Mobile World Congress 2014. In January, Orange and Telefonica joined banks and academic institutions in a European Commission-backed project to support European developers so that they can compete effectively in a global start-up landscape dominated by Silicon Valley.

In February, Telecom Italia announced a €4.5m fund targeting the most innovative players in digital, mobile and green information and communications technology (ICT). The move forms part of a broader initiative, complementing its Working Capital Accelerator that has funded 19 start-ups and assigned 109 grants in Italy over a five-year period.15

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Figure 4. Operator innovation fund and incubator announcements in 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Operator</th>
<th>Innovation fund/incubator details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 14</td>
<td>Mobily</td>
<td>Mobily launches new venture capital fund to invest in high-tech TMT start-ups. Target service domains include e-commerce, digital advertising, digital content.</td>
</tr>
<tr>
<td>Jul 14</td>
<td>KDDI</td>
<td>The second US$50m fund in the KDDI Open Innovation Fund series. The first fund was launched in 2012 and has invested in 24 tech start-ups.</td>
</tr>
<tr>
<td>May 14</td>
<td>Orange</td>
<td>Launches CIPMEN, an incubator for SMEs in Niger. CIPMEN is Orange’s third incubator partnership in Africa.</td>
</tr>
<tr>
<td>Apr 14</td>
<td>Ooredoo</td>
<td>Asia Internet Holding, a 50:50 JV with Rocket Internet targeting 15 APAC markets and focusing on e-commerce, classifieds, lead generation and payments.</td>
</tr>
<tr>
<td>Mar 14</td>
<td>Millicom</td>
<td>Millicom unveils Think, an incubator facility in Rwanda that will provide seed financing, structured training and coaching programs, as well as access to Tigo technical resources, investors and customers.</td>
</tr>
<tr>
<td>Feb 14</td>
<td>Telecom Italia</td>
<td>€1.5m a year seed investments in a range of start-ups including digital and green ICT - part of WCAP project and four Italian business accelerators.</td>
</tr>
<tr>
<td>Feb 14</td>
<td>SK Telecom Americas</td>
<td>VC arm of SK Telecom launches Innovation Accelerator to support early-stage start-ups in data center, telecom and IT technologies, with up to US$750k available per start-up.</td>
</tr>
<tr>
<td>Jan 14</td>
<td>Telefonica/Orange</td>
<td>Telefonica and Orange are founding partners of EC’s Startup Europe Partnership, designed to build bridges between Europe’s start-up, corporate and investment communities.</td>
</tr>
</tbody>
</table>

Source: Operator press releases and news reports cited herein.

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15. “Telecom Italia launches new E.45 million Corporate Venture Capital investment program to ‘seed’ the most promising Italian digital start-ups over the next three years,” Venturecapital, 21 February 2014.
One of the most interesting features of the current wave of accelerator initiatives is how operator needs are shaped by local market needs and competitive dynamics. Asian operators have been bolder than many of their peers in terms of the scope of their adjacent market acquisitions, and this is reflected in their venture capital arms’ most recent initiatives.

In February, SK Telecom’s venture capital arm launched SKTA Innovation Accelerator with a view to seed start-ups in core technologies such as data center and IT, in what the operator believes will fill a void in current VC funding models that focus on cloud technologies and software. Partnership is a key focus of the initiative, with SK Telecom Americas pairing entrepreneurs with strategic advisors as part of its value-add.

Meanwhile, in July, Japan’s KDDI announced the launch of its latest US$50m fund, Open Innovation II. At the same time, it announced that it had invested US$8m in four US start-ups – an educational social network (Edomo), a free digital publishing platform (ISSUU), a seat upgrading service (Pogoseat) and technology news media (VentureBeat). Fellow Japanese operator NTT DOCOMO already has a US$109m fund in place, while Softbank created a US$250m fund in 2013.

Many operators are taking steps to globalize their incubator initiatives. While a presence in Silicon Valley remains vital for the incubator concept to emerging markets. For example, Orange is growing the global reach of its incubator Orange Fab, which was launched last year in Silicon Valley and has supported start-ups providing a range of services, from smart lighting to medical apps.

The French operator has expanded the Orange Fab program to markets including France, Japan and Poland, with additional innovation investments in the likes of India and Tunisia. Africa is proving to be an important focus area: in May, Orange set up an incubator called CIPMEN to support SMEs in Niger, having already set up incubators in Senegal and Mauritius. Meanwhile, Millicom has set up a tech incubator in Rwanda, launching a purpose-built facility in the capital, Kigali, in March.

The appearance of incubators in emerging markets underlines the role operators can play as leaders of technology ecosystems, particularly in countries where entrepreneurs may lack support structures. Yet although accelerator programs offer a number of established advantages to operators – from lowering the risks and costs associated with new projects to enabling operators to tap into a wider talent pool – there are still plenty of challenges that accompany efforts in this sphere.

For one, levels of R&D investment as a proportion of revenues remain low in the telecommunications sector compared to adjacent sectors. While this is not a new phenomenon, it places additional importance on open innovation strategies in the widest sense that include not only incubator initiatives, but also organizational overhaul in the form of new business units, leadership roles and innovation tools.

Figure 5. Levels of R&D investment in technology, media and telecommunications

<table>
<thead>
<tr>
<th>R&amp;D as % revenues</th>
<th>Internet players</th>
<th>Equipment and IT services</th>
<th>Media and content providers</th>
<th>Telecoms operators</th>
</tr>
</thead>
</table>
| Source: “Are telecom services the hidden engine of innovation in the ICT ecosystem?” Network Industries Quarterly, 2011.

Creating an innovation culture at large stretches well beyond targeted incubator initiatives. While the creation of digital business units may give new impetus to the development of new services, question marks remain over how best to spread innovation across the entire telco organization. Recruiting and retaining software developers and retraining existing employees may have an important role to play, for example.

A holistic innovation program can leverage accelerator programs for well-defined digital service areas, but a number of other steps can also be taken, from opening APIs to key platforms and revisiting employee incentives, to realigning in-house capabilities with local market needs and opportunities. Marrying incubation activities with a wider program of crowdsourcing, ecosystem collaboration and venture capital funding in an effective way is no easy task, and regular reviews of innovation agendas are a must. While many operators are focused on partnering frameworks and incubating new services as a route to service innovation, a robust internal collaboration structure should never be overlooked.

Industry support growing for IPX

Internet protocol eXchange (IPX) is an interconnection model that has been gaining traction in recent years as IP services become the industry norm and operators look to generate new revenue streams and gain competitive advantages. The last decade has seen the industry position IPX as the networking technology of the future, with the GSMA promoting common specifications for end-to-end IP traffic delivery and quality of service via IPX.

While the benefits of the technology itself have been recognized for some time, operator migration to IPX is a more recent phenomenon. A study conducted last year by SAP and telecomasia shows that 56% of operators worldwide have now connected to IPX networks, marking a substantial increase from 2011 when a similar study showed that only one-third of operators were connected.19

There are many reasons why operators are taking advantage of IPX in greater numbers. LTE is now a mainstay of the industry landscape and is spurring operators to seek new ways of monetizing mobile data. Customer demand for mobile data while traveling, coupled with regulatory pressure on roaming prices, are driving operators to reconsider their international service portfolios – and pursue new interconnection strategies involving IPX to support this.

A number of wholesale connectivity providers now provide IPX capabilities and have enlarged the portfolio of services they provide to operators. Last year saw Belgacom International Carrier Services (BICS) provide the first intercontinental roaming connection over LTE, while Qatar’s Ooredoo launched the first IPX-enabled network in the Middle East using Tata Communications’ IPX+ platform. On a different note, Tata Communications and Telecom Italia Sparkle introduced the world’s first LTE roaming peering between two IPX providers, enabling the two providers to exchange LTE traffic between their respective platforms.

This year has seen news flow regarding IPX accelerate still further. In May, Sweden’s TeliaSonera launched an IPX solution for carriers, mobile operators and content providers that enables efficient delivery of services such as HD voice, music streaming and LTE roaming.\(^\text{20}\) In the same month, Telefonica Global Solutions announced a range of integrated services delivered over IPX, including voice over IPX (VoIPX) and LTE data roaming.\(^\text{21}\)

In June, Telenor Global Services and Vodafone’s wholesale arm announced an IPX interconnect and LTE peering agreement, helping them to expand their 4G footprints and underlining the importance of mobile operators in the IPX ecosystem.\(^\text{22}\) Meanwhile, the provision of additional IPX voice capabilities remains a priority for wholesale connectivity players, with both BICS and IDT announcing services that provide superior voice services for their operator customers.

While such developments signal an ecosystem that is maturing rapidly, there are plenty of challenges faced by actors in the IPX market, particularly when it comes to putting long-term strategies into place. While the business case of introducing IPX is clear – a leaner interconnection model suited to a range of new services – the devil is in the details.

First and foremost, IPX providers and their customers should bear in mind that IPX is best seen as a set of capabilities. It can act as an alternative to the internet, offering high levels of security and quality control, as well as a commercial structure that dovetails with existing operator interconnection models. The fact that it enables interworking between different kinds of networks – including non-mobile networks – augurs well for IPX to increase the ubiquity of IP-based services, for example.

However, the very range of use cases enabled by IPX means that providers and operators alike should carefully delineate the business cases underlying different IPX capabilities. Currently, legacy services such as voice and GPRS roaming exchange (GRX) account for the majority of IPX traffic, and more sophisticated capabilities have yet to make their presence felt. Another complicating factor is that many smaller operators are taking something of an opportunistic approach to deploying IPX, waiting until large established players start migrating significant traffic loads.

\(^{21}\) “Telefonica launches Global Solutions IPX suite,” Telefonica, 14 May 2014.
\(^{22}\) “Telenor Global Services and Vodafone Carrier Services interconnect for your 4G future,” Telenor, June 2014.
In this light, IPX providers need to form closer dialogues with their customers, ensuring that they clearly articulate which service they can support and how their product road maps will evolve. Understanding new drivers of demand is also critical – for example, a significant minority of operators already cite IPX reach as a primary factor when selecting an LTE roaming provider.

**Figure 7. Operator considerations for selecting an LTE roaming provider**

Question: What would be your primary driver to select an LTE roaming provider?

<table>
<thead>
<tr>
<th>% respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
</tr>
<tr>
<td>LTE roaming on-net footprint</td>
</tr>
<tr>
<td>Roaming expertise</td>
</tr>
<tr>
<td>IPX reach</td>
</tr>
<tr>
<td>Current GRX provider</td>
</tr>
</tbody>
</table>


While greater industry focus on services such as LTE roaming and HD voice is putting IPX further up the operator agenda, there is no doubt that the industry’s migration to IPX is a long-term process. Alternative interconnection platforms such as GRX, TDM and non-IPX networks such as IP MLPS will remain important for some time to come, while the prospect of multiple IPX platforms providing seamless connectivity is still some way off, despite increasing levels of collaboration through peering agreements.

Looking ahead, IPX providers should take a holistic view of the opportunities afforded by the technology. On one hand, educating operator customers on the benefits of IPX is a given for all providers. However, changing business requirements may entail innovation well beyond IPX standards themselves – in areas such as protocol conversion, for example. At the same time, there may be opportunities to target new customer segments. OTT providers currently use the public internet to deliver online content to users, partnering with content delivery networks (CDNs). In time such companies may start to value the quality-of-service (QoS) guarantees enabled by IPX.

**Vendors eye emerging markets to sustain smartphone growth**

Explosive take-up of smartphones has been one of the defining features of the technology and telecommunications in recent years. In 2009, smartphone penetration of the global population stood at 9%, but this had risen to 22% by the end of 2013, according to industry estimates. While this suggests that there is plenty of growth available to device manufacturers, shipment growth is now firmly skewed towards emerging markets, and current forecasts show that less developed regions will account for a growing proportion of global shipments in years to come.

**Figure 8. Smartphone shipment growth in developed and emerging regions**


While emerging markets have accounted for the majority of global shipments since 2011, a more recent trend has seen growth levels trailing off in mature regions. 2014 represents a watershed moment for mature market shipments, with a 4.9% increase predicted as growth falls below double-digit levels for the first time. By contrast, emerging market shipments are set to rise by 32.4% in 2014, with replacement cycles driven by feature phone users upgrading to low-end smartphones providing a strong platform for continuing growth.


Many established device vendors and smartphone OS providers are now recalibrating their strategies to capitalize on demand in emerging regions, whether in terms of widening the reach of existing flagship smartphones or pushing down price points through ecosystem collaboration.

In September, Samsung introduced three dual-SIM versions of its flagship Galaxy Note 4 device in China, the world’s largest smartphone market. In September, reports surfaced that the first devices running Samsung’s in-house Tizen OS would appear in India later in the year. Meanwhile, LG is making new moves with low-end 3G smartphones, unveiling the L Fino and L Bello in August, which will initially be made available in Latin America.

In June, Google unveiled a new program called Android One that provides hardware and software guidelines for device manufacturers and is designed to help reduce the time and costs involved in developing affordable smartphones. The web giant has uncharted emerging markets firmly in mind, and September saw its first Android One phones launched at a price point of Rs.6,399 in India, where it is working with local partners including Micromax, Karbonn, Spice and chipmaker MediaTek.

Google plans to expand its Android One program to Indonesia, the Philippines and other South Asian markets by the of 2014, with other countries to follow in 2015. This initiative comes at a time when Asian markets are set to become the global growth leaders in smartphone shipments, with six of the region’s emerging markets featuring among the top 10 global markets forecast for growth by value in 2015.

**Figure 9. World’s top 10 smartphone markets for growth by value, 2014-2015**

<table>
<thead>
<tr>
<th>Ranking</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>India</td>
</tr>
<tr>
<td>2</td>
<td>United States</td>
<td>China</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>Indonesia</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>South Africa</td>
</tr>
<tr>
<td>5</td>
<td>United Kingdom</td>
<td>Brazil</td>
</tr>
<tr>
<td>6</td>
<td>Germany</td>
<td>Pakistan</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>Nigeria</td>
</tr>
<tr>
<td>8</td>
<td>South Korea</td>
<td>Egypt</td>
</tr>
<tr>
<td>9</td>
<td>Russia</td>
<td>Vietnam</td>
</tr>
<tr>
<td>10</td>
<td>Italy</td>
<td>Bangladesh</td>
</tr>
</tbody>
</table>


As established players focus ever more firmly on smartphone gains in emerging markets, the competitive landscape in these markets is itself widening further. Mozilla’s Firefox operating system is starting to gain traction in a number of markets. At the 2014 Mobile World Congress, Mozilla announced a deal with Chinese chip designer Spreadtrum Communications to support its push to develop US$25 smartphones.

In August, Mozilla launched two Firefox OS smartphones in India, with a US$33 device – India’s lowest-priced smartphone – made available by local manufacturer Intex and another through Spice. The Intex-made Cloud FX is optimized for web browsing and social networking on 2G and Wi-Fi, and aims to capitalize on rising demand for smartphones in a market where 212 million sub-US$100 feature phones were shipped last year. The new devices mark Mozilla’s first foray into Asia, with Firefox OS devices already available in selected European and Latin American markets.

Local manufacturers themselves are also playing an increasingly pivotal role in markets where smartphone penetration is set to grow. China is a case in point, where local vendor Xiaomi has made significant strides in recent years. Launched only in 2010, Xiaomi is now the largest smartphone vendor in China and number five worldwide. A purely online presence has allowed it to maximize brand affinity with customers by sidestepping the need for distributors and retailers, while ensuring it can keep prices down for cost-conscious consumers looking for the best deal.

In April, Xiaomi announced it would target the Indian smartphone market as part of its expansion into 10 emerging markets in 2014. The newcomer is selling its devices in India via Flipkart.com, the country’s largest online retailer.

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Looking ahead, the paradigm shift in smartphone demand currently under way poses many new questions for both established players and fast-growing local players. Global vendors must strike a balance between maintaining their brand strength in higher-margin developed markets, while at the same time overhauling their business and operating models to compete effectively at ever-lower price points in emerging regions.

Partnerships with other technology providers and operators will take on greater importance over time, particularly given that the subsidy model that has driven the smartphone revolution in North America and Europe is largely absent in emerging markets. In this regard, Huawei is partnering with software and internet companies as it targets smartphone gains in emerging markets.30

Operator-branded smartphones represent another potential avenue of innovation. As smartphone take-up slows in developed markets, a number of operators are now launching branded low-end smartphones running on 4G, yet similar moves in emerging markets have historically centered on feature phones. China Mobile launched two self-branded smartphones last year, but such moves have proved the exception rather than the rule thus far.

Looking ahead, it is clear that the smartphone industry is set to change dramatically as new vendors challenge established manufacturers in high-growth markets. Competition levels are likely to be particularly pronounced in Asia, where home-grown players have emerged in markets such as China, India, Indonesia, Malaysia, Pakistan and Thailand. New competencies are needed if established players and newcomers are to thrive as smartphone industry dynamics evolve: there is no doubt that creating a compelling user experience at ever-lower price points will be a challenge for all.

Global stakeholders consider new internet governance models

The global ICT industry has never been in a greater state of flux. The barriers between technology, media and telecommunications continue to fade, and the internet economy is playing an ever more important role as a productivity driver and agent of globalization.

However, the growth of the web is creating concomitant challenges. Issues such as digital rights and cybersecurity are resonating well beyond the ICT industry, particularly in the post-Snowden era, where the interactions between governments, citizens and the private sector in the digital sphere are attracting more scrutiny than ever before.

Internet governance is a wide-ranging concept that describes the global arrangements that organize the resources and functions of the internet. As a distributed network of networks, the web lacks a centralized governing body, and over the last decade a number of initiatives have been designed to create a multi-stakeholder model that can accommodate the various actors involved, which range from international organizations such as the United Nations and Internet Engineering Task Force (IETF) to civil society groups and national governments. Over this period, the term “internet governance” has itself expanded in meaning and now refers to policy as well as technical issues relating to the functioning of the web.

Figure 10. Matrix of international organizations involved in internet governance

The move to a global multi-stakeholder model has been envisaged for some time, notably at the World Summit on the Information Society 2002-2005. This UN-sponsored event concluded with a number of actions, including the creation of an annual Internet Governance Forum in order to promote inclusive debate, and, crucially, the transformation of Internet Corporation for Assigned Names (ICANN) – the US-based body contracted to assign domain names – into a global body.

Calls for greater globalization of internet governance have gathered pace in the wake of national security revelations in 2013 and since a number of organizations signed the Montevideo Statement on the Future of Internet Cooperation, which underlined the need for a global multi-stakeholder model of internet governance, in October last year.

In 2014, a number of international forums designed to promote dialogue on such issues have gained increased prominence. NETmundial, a two-day meeting held in Brazil in April, was organized by the Brazilian Internet Steering Committee and 1Net, an international group of stakeholders involved with internet governance. Ministerial representatives from 12 countries and five continents attended, alongside representatives from the International Telecommunications Union (ITU), the United Nations’ Department of Economic and Social Affairs (DESA) and the European Commission.

In terms of outputs, the meeting delivered a nonbinding statement that underlined the need for consensus-based decision-making on internet governance. This emphasis on multi-stakeholder management recommended that ICANN be under international control by September 2015 and followed the announcement in March by the U.S. Commerce Department’s National Telecommunications & Information Administration (NTIA) to transfer key internet domain name functions to the global multi-stakeholder community.31

However, building international consensus remains no easy task – governments including China, India, Iran and Russia expressed some dissatisfaction with the approach identified at NETmundial, instead vaunting multi-lateral internet management, which would give states a greater say in decision-making and represents a more UN-centric approach to the issue. Such differences in national attitudes are also making themselves felt in local laws. During the conference, Russia’s lower parliament passed a package of laws that prohibit internet companies from doing business in the country unless data obtained in-country resides on local servers for at least six months. At the same time, Brazil’s Marco Civil da Internet – an internet bill of rights – was signed into local law. It underlines the need for net neutrality and has no stipulations regarding local data centers.

In this way, attitudes about data retention and sovereignty are very much intertwined with more esoteric notions of ideal models for internet governance. And while many industry watchers have broadly welcomed the move to place ICANN under international oversight, some fear that any move to place the technical aspects of the web closer to governmental scrutiny – even if within the framework of a global multi-stakeholder community – could open the door to a Balkanization of the internet in the future.

31. “NTIA Announces Intent to Transition Key Internet Domain Name Functions,” National Telecommunications & Information Administration, 14 March 2014.
Meanwhile, September’s Internet Governance Forum (IGF), held in Turkey, saw further debate of a number of issues. Established in 2006 by the UN, the IGF undertakes annual meetings with representation from across the private and public sectors. Over 2,000 participants attended this year’s event in Istanbul, including stakeholders from civil society, government, intergovernmental organizations, the technical community and the private sector. Themes discussed included the role of ICANN, specifically how its accountability mechanisms should change once its contractual arrangement with the US Government ends. At the same time, the outcomes from the NETmundial event were also promoted. For their part, telecommunications operators have a vested interest in how internet governance models develop. In July, the European Telecommunications Network Operators’ Association (ETNO) underlined that the current multi-stakeholder method failed to keep pace with growing demands for openness and inclusivity, emphasizing that more needed to be done to address the needs of developing-country stakeholders. ETNO also gave its support for the continuation of IGF as a discussion forum, stressing that its mandate was not designed to produce negotiated policy positions and that its role in shaping policy debate served a vital function in itself. Figure 11. Internet Governance Forum 2014 participation by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>100</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>200</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>300</td>
</tr>
<tr>
<td>Turkey</td>
<td>500</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>400</td>
</tr>
<tr>
<td>Western Europe and others</td>
<td>600</td>
</tr>
</tbody>
</table>

Source: ICANN.

Some stakeholders want the IGF to strengthen its position as the global debate on internet governance becomes more pronounced. In February, the European Commission underlined the need for a stronger IGG as part of what it termed “concrete actions” that would also include the creation of an online platform for creating transparency on internet policies, the Global Internet Policy Observatory, and a review of conflicts between national laws or jurisdictions. For their part, telecommunications operators have a vested interest in how internet governance models develop. In July, the European Telecommunications Network Operators’ Association (ETNO) underlined that the current multi-stakeholder method failed to keep pace with growing demands for openness and inclusivity, emphasizing that more needed to be done to address the needs of developing-country stakeholders. ETNO also gave its support for the continuation of IGF as a discussion forum, stressing that its mandate was not designed to produce negotiated policy positions and that its role in shaping policy debate served a vital function in itself. All told, internet governance issues are likely to remain complex going forward. The NTIA’s decision earlier this year to transition key internet domain name functions to the global multi-stakeholder community via ICANN remains the most significant development of recent months. While support continues to grow for the multi-stakeholder model, it is not without its critics. For one, the World Bank has suggested that there are limits to this approach, and that the civil society agenda can inform global debate in a more proactive way, whether through closer alignment with IGF, ICANN and NETmundial or through clearer articulation of needs and preferences. Meanwhile, the role of governments within the multi-stakeholder community continues to attract scrutiny. By their very nature, democracies are likely to harbor conflicting views and approaches, while also experiencing a regular turnover of staff and leadership – factors that could weaken their voice in the internet governance ecosystem in the long run. In this light, it is important for both civil society groups and governments to build a shared agenda that can stimulate new levels of cooperation within a multi-stakeholder framework and work against any fragmentation of viewpoints. Ultimately, there is an increasing onus on all stakeholders to revisit their positions and rearticulate their priorities in an environment where the number of contributing voices will only widen.

33. “Commission to pursue role as honest broker in future global negotiations on Internet Governance,” 12 February 2014.
Open cable network regulation under scrutiny in Europe

Creating equality of network access to fixed-line networks has long been a priority for European regulators keen to ensure strong rates of broadband take-up and a wide range of competitively priced services for end users. Local loop unbundling initiatives that sought to open up the last mile of incumbent network infrastructure have long been a feature of EU competition policy in the sector, and equality of access has remained a firm feature of the regulatory landscape for fiber broadband.

However, cable operators are also significant infrastructure owners in many European broadband markets, and incumbents in markets with high levels of cable market share have pressed for similar equality of access rules to be imposed on rivals providing super-fast broadband and residential triple-play packages. Recently, this debate has been particularly pronounced in markets where cable providers have a substantial share of the market or where consolidation of the cable sector is under way.

Figure 12. Cable broadband market share in selected European markets

<table>
<thead>
<tr>
<th>% subscriber connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

Source: OPTA, BIPT, Ofcom, Point Topic (all figures refer to year-end 2013, except Netherlands, which is Q1 2014).

The issue of open cable networks has been attracting plenty of attention in the Netherlands. In November, it was reported that a majority of the Dutch parliament supported opening up cable networks to ensure competition, with the Dutch Government planning to bring up the issue of symmetric access regulation for national networks as part of the reform of EU telecommunications regulation starting in 2015.36

This follows the European Commission’s decision in October to clear the acquisition of Dutch cable provider Ziggo by Liberty Global.37 Conditions for approval include the sale of Film1, Liberty Global’s premium film TV channel, as well as the termination of certain clauses in channel carriage agreements, but did not include open access regulations, disappointing the government.38

In the same month, the Dutch regulator ACM underlined that the incumbent provider KPN must continue to grant access to rivals for a three-year period, and suggested that providing competitor access to Dutch cable network would prove troublesome by comparison.39 Earlier in 2014 a Dutch court had ruled that cable companies were not required to meet previous legislation requiring them to open their networks. The issue of open cable networks has been debated for well over a decade in the Netherlands – the Dutch cabinet having initially proposed a law to open cable TV networks to internet access providers in 2000.40

39. “For the next three years, Dutch telecom company KPN must continue to grant its competitors access to its network,” Authority for Consumers & Markets, 31 October 2014.
However, in France, recent M&A has forced the French competition watchdog to consider open cable network access as a merger remedy. While Altice’s €13.5b takeover of SFR has been approved, conditions have been imposed including a requirement for Numericable to open up its cable infrastructure to rivals. At the same time, the French cable company has been tasked with offloading its Complete! DSL network to another player, as well as divesting its overseas businesses in Reunion and Mayotte.41

Such a move would mark the first time that a cross-segment in-market merger has involved regulatory impositions on cable infrastructure itself, and highlights how the question of equality of access is moving beyond the traditional spheres of mobile and telecommunications landscape.

Belgium saw rules put in place last year allowing competitor access to cable networks, following initial proposals in 2010 that called for cable networks to be opened to competition. In December 2013, Belgium’s telecommunications and media regulators finalized rules governing open cable access, having previously published technical requirements. The pricing rules stipulate a one-time set-up fee of €750,000 alongside a monthly fee of €2, with cable networks required to offer access within six months of the payment of the set-up fee.42

In January, Belgian mobile operator Mobistar made payments to two cable providers, Telenet and Brutele-Tecteo, in order to gain access to their networks and provide triple-play and quad-play services. Previously, the mobile player had used a hybrid digital TV solution from Belgian DTH platforms. While the opening of the cable market has been challenged this year, the Court of Appeal of Brussels has upheld the new rules, although debate continues over whether wholesale pricing and operating conditions suit competitors accessing cable networks.43

For its part, the EU has tended to oppose national regulatory moves to open up cable networks, fearing the effect it would have on innovation and investment. However, the European Commission did endorse the Danish regulator’s 2009 decision to introduce wholesale access provisions for Denmark’s largest cable network, recognizing the incumbent carrier’s unique position as an owner of both cable and copper network infrastructure.

Looking ahead, it will be interesting to see how the EC tackles the issue as part of its reform of telecommunications regulation. Following a 2012 consultation on a revision to its Recommendation of Relevant Markets, the EC received a number of responses highlighting the potential for cable infrastructure to be included in the markets for wholesale broadband access. At the heart of the issue is whether demands for technology neutrality in wholesale access regulation trump the need to incentivize cable operators to invest in their infrastructure and compete with incumbent broadband providers.

41. “France OKs SFR-Numericable tie-up with conditions,” Total Telecom, 28 October 2014.
43. “Mobistar welcomes the final decision of the Court of Appeal in favour of the regulation of the market on the Telenet cable network,” Mobistar, 13 November 2014.
4.
Mergers and Acquisitions

Introduction

Telecoms M&A activity remains pronounced worldwide, with US$77.2b of transactions announced in Q3 2014. Deal value was down 21% compared to Q2 2014 but still ranks as one of the highest quarterly totals registered in recent years. The quarter saw 143 deals announced, and there were a number of sizeable transactions in Europe and Brazil as operators continue to seek consolidation opportunities.

Adjacent market acquisitions also continue to act as a focal point for operators, with areas such as IT services, content management and device distribution featuring as target areas. The sixth-largest transaction of Q3 2014 saw Canadian carrier Shaw Communications acquire US-based ViaWest, a provider of co-location, cloud and managed services to medium-sized businesses for US$830m plus debt. With demand for data centers outstripping supply, Shaw is looking to capitalize on fast-changing needs in the enterprise segment.

Considering transactions by target geography, deal volume increased in the Americas by 20% compared to the three months preceding June, while there were declines of 24% and 28% in Asia-Pacific and in Europe, Middle East, India and Africa (EMEIA) respectively. In terms of transaction value, the Americas remains the dominant region, accounting for 82% of the global total – the largest deal of the quarter was Telefonica’s US$9.4b acquisition of Brazilian wireline provider Global Village Telecom.

Figure 13. Telecoms M&A deal value by target area, Q3 2014

Sources: ThomsonOne, Capital IQ, Mergermarket.

Latin America convergence opportunities in focus

The land grab for residential bundle customers continues to drive deals in the Latin American telecommunications sector. In May, Telefonica took a majority stake in one of Spain’s largest sports TV broadcasters, Distribuidora de Television Digital S.A., and has now

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turned its attention toward bulking up its presence in the Brazilian fixed-line market. In September, the Spanish incumbent announced the acquisition of GVT from French media conglomerate Vivendi for €4.66b in cash as well as a payment representing 12% of Telefonica Brasil’s shares, after its integration with GVT.45

The deal also sees Vivendi take Telefonica’s 8.3% stake in Telecom Italia, and comes after the Spanish operator outbid the Italian incumbent for GVT, having entered exclusive talks with Vivendi. GVT has a substantial fixed-line footprint in Brazil, with 10.8 million homes passed in 21 Brazilian states. GVT’s market presence is also seen as highly complementary to Telefonica’s existing business in Brazil, with 90% of its 2.5 million broadband customers located outside Sao Paolo. The acquisition of GVT gives Telefonica a total of 6.5 million broadband customers, helping reposition its Brazilian business as a provider of residential bundles at a time when strong growth is expected in the broadband and pay-TV markets.

**Figure 14. Brazil broadband and pay-TV penetration**

<table>
<thead>
<tr>
<th>% population</th>
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<tbody>
<tr>
<td>0</td>
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<tr>
<td>5</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td>15</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

Source: “Pay TV and fixed broadband analyzed in ten biggest Brazilian capital cities,” Teleco, 13 January 2014.

Other convergence-related M&A took place elsewhere in the region during the quarter. In July, Jamaican mobile operator Digicel announced that it had reached an agreement to purchase local triple-play provider Telstar Cable Ltd, with the deal completed in September following the required approvals from Jamaica’s Broadcasting Commission. The transaction marks Digicel’s fourth cable acquisition in recent months as part of its diversification strategy.46

Elsewhere in the Caribbean, Cayman Islands-based WesTel Limited, a triple-play provider, acquired fellow fixed-line operator British Overseas Territory Cable & Telecommunications Ltd (BOTCAT), which has pay-TV interests in both Cayman Islands and Bermuda. Sweden-based Millicom has also been pursuing consolidation in Latin America. In August, it completed the merger of its Tigo mobile business with Colombian cable and fixed-line player UNE,47 while announcing the acquisition of Guatemalan cable TV provider Cablefusion in September.48 In Chile, fixed-line operator Telefonica del Sur (Telsur) acquired the assets of Plug and Play Net, which offers cable TV services in the south of the country.

47. “Merger in Colombia completes to provide a new era of digital choice,” Millicom, 14 August 2014.
Consolidation continues in Europe

In-market consolidation is an enduring theme in the European telecommunications sector, and the three months prior to September saw a number of moves by operators to ramp up their presence in core market segments. In September, Orange made a US$4.3b bid to acquire Spanish altnet Jazztel in its largest acquisition in close to a decade. The deal doubles the French player’s share of the Spanish broadband market, and follows moves by Vodafone and Telefonica to acquire local pay-TV providers. Jazztel has grown at the expense of larger rivals in recent years – having launched mobile services in 2008, it also began offering fiber-to-the-home (FTTH) broadband last year.

Meanwhile, Danish incumbent TDC announced the acquisition of Norwegian cable TV provider Get AS in September in a deal worth US$2.2b. TDC is already present in the Norwegian market through the YouSee brand, and the acquisition sees it increase its number of cable households from 1.2 million to 1.7 million. Looking ahead, the Danish carrier believes that Get AS will generate strong complementarities with its existing business in Norway, with Get and YouSee set to benefit from infrastructure synergies and joint product development.49

The Norwegian mobile market is also witnessing consolidation, with TeliaSonera announcing the SKr5.1b (US$740m) acquisition of Tele2’s Norwegian mobile business in July. The transaction will increase TeliaSonera’s share of the mobile market to approximately 40%, and the Sweden-based player plans to accelerate its Norwegian 4G rollout following the deal in order to achieve 98% population coverage by 2016, two years earlier than envisaged.50

The acquisition is subject to approval from the Norwegian Competition Authorities. Although the operators concerned have proposed measures to remedy competition concerns, Norway’s competition watchdog has suggested that these proposals may be insufficient as they stand.51

A number of other deals also underline the drive toward consolidation in the region. In September, UK-based Vodafone announced that its Greek subsidiary agreed to acquire 72.7% of Hellas Online (HOL) for €72.7m (US$91m). HOL has 519,000 fixed-line and broadband customers, and the acquisition builds on existing commercial cooperation between the two companies, with Vodafone Greece having acquired an 18.5% stake in 2009.52

Earlier, in July, Vodafone and business partner Wind Hellas submitted a joint bid for Forthnet, Greece’s largest pay-TV provider. Meanwhile, German altnet United Internet AG signed an agreement with private equity firm KKR to acquire the shares it did not already own in Versatel, which owns Germany’s second-largest fiber optic network and has 440,000 ADSL and SDSL customers.53

Figure 15. Top 10 telecoms M&A worldwide by deal value, Q3 2014

African operators divest tower assets

Tower sales have long been a favored route for operators looking to free up cash and reduce the costs of rural mobile service provision in emerging markets, and Q3 2014 saw a number of tower transactions take place across Africa. In September, India’s Bharti Airtel agreed to divest over 3,500 telecommunications towers to Eaton Towers in six countries: Burkina Faso, Ghana, Kenya, Malawi, Niger and Uganda. Under the agreement, Bharti will lease back the

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51. “Norway may block TeliaSonera’s Tele2 Norway acquisition,” Reuters, 1 December 2014.
52. “Vodafone Greece agrees to acquire 72.7% of Hellas Online,” Vodafone news release, 22 August 2014.
53. United Internet acquires 100% of Versatel shares,” United Internet, 3 September 2014.
towers from Eaton as part of a 10-year contract, and the deal enables the Indian player to reduce debt and capital expenditure on passive infrastructure.\textsuperscript{54}

In a similar leaseback arrangement announced in July, Bharti also sold 3,100 towers in four countries (not disclosed) to Helios Towers, bringing Helios' total number of owned towers in Africa to 7,800. The two deals form part of a Bharti's strategy to sell off its 15,000 towers in 20 African countries to independent tower companies, in an effort to reduce the high costs of operating infrastructure and to improve its leverage.\textsuperscript{55}

In August, Etisalat Nigeria announced the sale of 2,136 towers to IHS Holding Limited (IHS) as part of a broader strategy to drive improvement in network performance and accelerate the roll out of 2G and 3G coverage. The deal marks the first such sale-and-leaseback transaction by a GSM operator in Africa's largest mobile market and follows IHS's installation of alternative energy sites in Nigeria and additional investments in its Network Operations Centre to improve uptimes.\textsuperscript{56}

One month later, MTN reached an agreement with IHS to transfer 9,151 of its mobile towers, with reduced operating costs and two entities will set up a joint venture that will in turn market infrastructure sharing services to other Nigerian operators.\textsuperscript{57}

The outlook for the African towers industry remains highly positive, given ongoing capacity demands in the region that are driven by the need for both rural coverage gains and improved mobile data throughput. Recent funding initiatives highlight market confidence, with Helios Towers Africa raising US$630m in new investment in July this year and Helios Towers Nigeria completing the first bond issuance by an African tower company. This year has seen a sharp increase in the number of towers owned by tower specialists, and nearly half of Africa's towers are expected to be under tower company ownership by the end of 2015.\textsuperscript{58}

Asian operators eye new value chain opportunities

Adjacent market M&A remains an important theme in the sector, and Asian carriers have often been more adventurous than carriers in other regions in terms of extending their capabilities across the value chain. Q3 2014 has been notable for a spate of deals involving targets in equipment manufacturing and distribution. In September, Telkom Indonesia acquired a total of 25% of PT Tiphone Mobile Indonesia, a mobile phone distributor, for US$117.2m. The Indonesia incumbent is using the deal to strengthen its own distribution business, as well as increasing its presence in the prepaid credit market.\textsuperscript{59}

In August, Japan's SoftBank acquired a 37.7% stake in US mobile phone distributor BrightStar Corp for US$298m. This followed last year's acquisition of a 57% stake in the business and underlines SoftBank's desire to enhance its purchasing scale in mobile devices while creating further synergies through deeper collaboration.\textsuperscript{60} Meanwhile, Malaysia's Axiata Group agreed in July to sell its 24% stake in Thai MVNO and handset distributor Samart i-mobile back to majority owner Samart Corporation for US$88m. In September, Taiwan Mobile arranged to acquire 15% of Ambit Microsystems, an equipment manufacturer – however, gaining access to the company's 4G spectrum was the motivation behind the deal.\textsuperscript{61}

\textsuperscript{54} “Airtel divests African telecoms tower assets to Eaton Towers,” Bharti Airtel, 8 September 2014.
\textsuperscript{57} “MTN And IHS Agree Landmark Mobile Tower Outsourcing Agreement in Nigeria, IHS press release, 4 September 2014.
\textsuperscript{58} “TowerXchange analysis of the independent tower market in Africa,” TowerXchange, September 2014.
\textsuperscript{59} “Telkom to complete Tiphone stake buy this week,” TelecomAsia.net, 17 September 2014.
\textsuperscript{60} “Additional Purchase of Brightstar Global Group Inc. Shares,” SoftBank Corp, 6 August 2014.
\textsuperscript{61} “Taiwan Mobile to buy 15% stake in Ambit,” TelecomAsia.net, 29 September 2014.
Elsewhere, operators continue to ramp up their presence in other parts of the technology sector. SoftBank acquired a 10% stake in Finnish mobile and tablet game developer Supercell Oy in August for US$343m in order to capitalize on high demand for mobile gaming. In another notable deal, Australia’s Telstra took a 75% stake in Ooyala, a video distribution and analytics platform. Subsequently, Ooyala purchased London-based supply-side platform Videoplaza for an undisclosed sum in October, highlighting the fast pace of vertical integration in the video content management market.

Figure 17. Selected Asian operator adjacent market acquisitions, Q3 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Bidder</th>
<th>Target</th>
<th>Stake (value)</th>
<th>Business nature of target</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Sep 2014</td>
<td>Taiwan Mobile</td>
<td>Ambit Microsystems Corp (Taiwan)</td>
<td>14.9% (US$99m)</td>
<td>Wireless equipment manufacturer</td>
</tr>
<tr>
<td>22 Sep 2014</td>
<td>Telekomunikasi Indonesia International</td>
<td>Contact Centres Australia Pty</td>
<td>75% (US$10m)</td>
<td>Business process outsourcing company</td>
</tr>
<tr>
<td>15 Sep 2014</td>
<td>PT Pramindo Ikat Nusantara (Indonesia)</td>
<td>Tiphone Mobile Indonesia</td>
<td>15.88% (US$74m)</td>
<td>Mobile phone and calling card distributor</td>
</tr>
<tr>
<td>21 Aug 2014</td>
<td>SoftBank Corp (Japan)</td>
<td>Supercell Oy (Finland)</td>
<td>10.2% (US$343m)</td>
<td>Mobile and tablet game developer</td>
</tr>
<tr>
<td>11 Aug 2014</td>
<td>Telstra Corp (Australia)</td>
<td>Ooyala, Inc. (US)</td>
<td>75% (US$270m)</td>
<td>Online video management service provider</td>
</tr>
<tr>
<td>7 Aug 2014</td>
<td>PLDT (Philippines)</td>
<td>Rocket Internet AG (Germany)</td>
<td>10% (US$446m)</td>
<td>Venture capital firm specializing in start-ups</td>
</tr>
<tr>
<td>6 Aug 2014</td>
<td>Softbank Corp (Japan)</td>
<td>Brightstar Corp (US)</td>
<td>37.7% (US$298m)</td>
<td>Wireless device distributor</td>
</tr>
<tr>
<td>2 Jul 2014</td>
<td>Samart Corporation Public Co Ltd (Thailand)</td>
<td>Samart I-Mobile Public Limited (Thailand)</td>
<td>23.93% (US$89m)</td>
<td>Communication equipment distributor</td>
</tr>
<tr>
<td>2 Jul 2014</td>
<td>Vocus Communications (Australia)</td>
<td>FX Networks (NZ)</td>
<td>100% (US$101m)</td>
<td>WAN services and IP telephony exchange provider</td>
</tr>
</tbody>
</table>

Sources: Mergermarket, Telecom Asia, Factiva.
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