



GSMA Intelligence

ANALYSIS

Mobile World Congress 2014 wrap-up

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Executive summary

The 2014 edition of Mobile World Congress was the busiest on record as industry players from across the mobile ecosystem met to do business, collaborate and set out a positive vision for the future.

By the time the curtain fell on the four-day conference and exhibition, over 85,000 delegates had passed through the doors at the industry's premier meeting place – shattering the previous record for visitors to the event.

The conference agenda and the exhibition both benefited from a huge increase in the wider ecosystem participation. The event attracted executives from the world's largest and most influential mobile operators, Internet and software companies, equipment providers, and companies from industry sectors such as automotive, finance and healthcare, as well as government delegations from across the globe.

Two of the key recurrent themes at this year's Congress were innovation and partnership as the industry looks at creating the networks, devices and services of the future, with a view to continually improve user experience.

The topics we selected in this report are therefore focused on key announcements and trends spotted during Congress, with a view to highlight the changes and growth factors that industry players will be implementing over the coming years to lead the industry's transformation.

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Networks: The network of tomorrow will be virtualised

Network virtualisation was a key theme at Congress, one that shows the transformational path that operators are willing to take to counter the stress that financial pressures are putting on profitability while effectively and efficiently monetising data growth and reducing vendor lock-in. This trend clearly shows that, in order to be sustainable in the near-future, operators networks will require the right amount of mobility, ultra high-speed networks, cloud computing, big data analytics and security.

Key points

- Speaking at Congress, Bruno Jacobfeuerborn, CTO at Deutsche Telekom, explained that “communication networks are facing a lack of scalable and sustainable architecture to meet the challenges ahead in terms of data traffic increases, video uploads and downloads, and enhanced M2M communication”
- Increased demand for new data services and the proliferation of new data-hungry devices are revealing weaknesses in current network infrastructure
- The industry is evolving from proprietary equipment networks to IT-based data centre networks that employ technologies such as software-defined networking (SDN), network function virtualisation (NFV), cloud-computing and big data analytics to provide a variety of converged services to consumers
- At Congress, Telefonica announced its group-wide NFV initiative branded UNICA with a view to redesign the operator’s mobile and fixed networks from proprietary infrastructure to platforms based on open standards
- NFV is highly complementary to SDN. Network functions can be virtualised and deployed without an SDN being required and vice-versa
- According to ETSI, early NFV deployments are already getting underway and are expected to accelerate during 2014-15

Viewpoint: NFV and SDN expected to disrupt the marketplace

Network virtualisation allows operators to simulate network resources through SDN and NFV technologies that decouple, run and optimise different functions of the network.

For instance, Telefonica’s UNICA platform is initially focused on virtualising signaling-related functions, including IMS (IP multimedia sub-system), DNS (domain name system), SMSC (short message service centre) and OCS (online charging system). The second phase will look at virtualising functions that carry traffic such as the core packet network.

Telefonica’s NFV programme is notably designed to “source different functions to different suppliers” and avoid vendor lock-ins. The company wants to design a virtualised network architecture that allows vendor interoperability in order to “enable a multi-vendor environment from day one.”

Another big announcement in this space was made by AT&T, which introduced its vision for the company’s network of the future: the ‘User-Defined Network Cloud.’ AT&T said the cloud-based architecture is “a global first at this scale.” The operator also announced the group of vendors that will work on implementing this strategy.

Another clear advantage that network virtualisation technologies bring to mobile operators is the ability to quickly adapt to changing business models. Through virtualised networks, operators can rapidly deploy new applications and services to generate new revenue streams and increase the value of the network.

Networks: Industry collaboration to scale small cells rollouts

The deployments of small cells – both indoors and outdoors – to support rising levels of data traffic in dense urban areas was a major theme at Congress. Several vendors made announcements, while there were updates from several operators deploying small cells in their networks.

Key points

- Vodafone plans to install more than 70,000 small cells, including pico and femtocells, by March 2016 in an effort to handle rising data traffic
- Korea Telecom has deployed 10,000 femtocells in Seoul and 8,000 in other dense urban areas
- Ericsson announced Telstra, MTN, Swisscom and Vodafone as the first customers of its ‘Radio Dot’ small cell technology
- Huawei announced a new “crowd-sourcing” small cell platform aimed at speeding up small cell deployments
- Qualcomm and Cisco have started developing small cells customised for enterprises
- Texas Instruments and NSN announced their collaboration on NSN’s next generation of indoor small cell base stations

Viewpoint: Small cells refocus on the enterprise

The hype around small cells has been ongoing for several years though this hype has often failed to translate into large-scale deployments and new service models. On the network side, interference and interoperability concerns have been barriers to adoption. But as mobile data traffic levels continue to rise, small cells are increasingly being seen as a vital component of a modern heterogeneous network.

Moreover, small cells are seen as highly spectral efficient, making them ideal for environments where spectrum resources are stretched.

“Small cells are a very important part of our network portfolio,” said Miguel Marin, Vodafone’s access director, speaking on a small cells panel at Congress.

Speaking on the same panel, KTs Yunyoo Lee said that the small cells deployed in the operator’s home market (South Korea) were now responsible for 15% of traffic. KT is now looking to deploy small cells beyond the main urban areas.

For outdoor cells, the main issue now appears to be the ability to acquire the sites where the mini base stations should be deployed – such as lamp posts and bus shelters – rather than with any technical issue. Huawei is addressing this with its “crowd-sourcing” model, while operators say they are open to working with aggregators and the cities themselves.

Finally, Congress also saw many instances of small cells being targeted at the enterprise market. This was the case with the Qualcomm and Cisco partnership, and a focus of several of the operators signing up to trial Ericsson’s Radio Dot system. Small cells specialist SpiderCloud Wireless launched an app called EASY-30, which claims to be able to configure a small cells network within 30 days of the first conversation between operator and enterprise.

Networks: Still early days for 5G

'5G' remains an embryonic concept but it was nevertheless a major talking point at Congress. The Next Generation Mobile Networks Alliance (NGMN) stated that "5G is around the corner," even though the group admitted that 4G would dominate "for the coming decade after 2020." As connecting the unconnected throughout the world becomes a major objective, it is vital that the next generation of networks are efficient and affordable, as well as fast. The industry needs to ensure the next generation is defined with customers at the forefront, and based on a global standard.

Key points

- The NGMN announced the launch of its 5G initiative. The group, which comprises 21 operators that between them provide more than 60% of the world's mobile connections, will begin by defining the use case for a next generation network technology to supersede 4G
- In 2015, once operators have specified their requirements, they will start defining the architectures that can implement and deliver them. The NGMN will cooperate with standardisation bodies, research institutes, regulators and vendors, as well as fellow operators - and potentially internet and OTT players
- The key requirements of 5G compared to existing technologies are likely to be: more bandwidth for faster data speeds (e.g. to facilitate real-time multimedia services), lower latency, greater network efficiency (i.e. better power efficiency, improved reliability, and lower operating costs), more secure networks, as well as greater flexibility especially in terms of the 'Internet of Things' and the vast array of different devices/interfaces that could connect to a future network

Viewpoint: Collaboration is the key to a 5G global standard

The concept of 5G is essentially still a set of aspirational statements outlining where mobile services need to go next. And with only 4% of the world's mobile connections currently on 4G networks and a further 30% on 3G, there is still much that can be achieved effectively using existing technologies.

However, the NGMN and the European Commission's 5G Public-Private Partnership -which launched late last year - are keen to lay down the foundations for the next network technology, the latter no doubt spurred on by the opportunity for Europe to return to the forefront of the mobile industry after being overtaken by the US and Eastern Asia in 4G deployments.

The need for additional spectrum will be a key challenge in delivering higher data speeds, but the demand for reduced latency could potentially have a bigger effect on 5G architecture. As 4G has become more prevalent, resources have become centralised and users have become accustomed to accessing data over shared platforms, but achieving a latency in the region of 1 millisecond actually limits the distance that radio signals can travel. Thus for 1 millisecond latency these platforms would have to be pushed back nearer to the customer, which would affect not only the operator ecosystem but also the points of connection back out to the internet - to some extent going against the ethos of what LTE has achieved.

While the advent of 4G has brought the mobile industry to the point where everyone is effectively using the same technology (in comparison to the range of variants present in the 2G and 3G age), the range of potential applications and therefore requirements for a 5G technology - both consumer and M2M - means that 5G is less likely to be just one network but rather a broad spectrum of technologies. As such it is vital that the relevant players collaborate at all stages of 5G development to ensure global technology standardisation.

Devices: Galaxy Gifts shows value behind app bundling

Samsung unveiled its latest flagship smartphone, and chief iPhone rival, the Galaxy S5. It would not be surprising if the new device surpassed sales of the S4 and even the S3 while asking questions of Apple's next iPhone. The most interesting element of this announcement is that Samsung took app bundling to the next level, clearly betting on content and user experience to drive sales, more than pure technology itself.

Key points

- With the Galaxy S5, Samsung is looking to move on from the issues that limited the success of its predecessor. It emphasised that the Galaxy S3 was the biggest selling smartphone in the Galaxy line to date, showing that consumers failed to respond to the eye-catching tech on the S4
- A lot of the new features are aimed at improving user experience rather than adding unnecessary technology
- Notable consumer-centric features include an on-board heart rate monitor, water and dust resistance, an adaptive screen that adjusts to light conditions and a fingerprint scanner (like the iPhone 5) for unlocking the phone and accessing other functions
- The metal-bodied device is compatible with the latest version of Wi-Fi and LTE (it can support up to eight LTE bands) and the 'Download Booster' feature allows the two connections to be used together to enable impressively fast download speeds
- The S5 has a powerful 2.5GHz quadcore processor which is supported by an equally powerful 2,800mAh battery capable of 10 hours of LTE web browsing or 12 hours of video playback. The Ultra Power Saving Mode can last 24 hours on standby on just 10% battery



Viewpoint: App bundles have a positive impact on churn

The Galaxy S5 will come with a range of app subscriptions and premium services worth more than \$500. The 'Galaxy Gifts' bundle include, for instance, a one-year subscription to personal trainer app Run Keeper, a six-month subscription to the Wall Street journal (worth \$160) and a three-month LinkedIn premium account (worth \$75).

This type of bundle helps improve churn and customer loyalty, an approach that Samsung has already tested with the Galaxy S3, which bundled premium Dropbox storage. At Congress, Dropbox claimed that of the consumers who were aware of the Dropbox/Samsung partnership, 18% said the integrated cloud service was instrumental in their device purchase decision.

Bundling applications and services is also a strategy that mobile operators have been implementing over the past years, with notably Orange partnering with music streaming provider Deezer and video streaming provider Dailymotion. In August 2010, Orange France introduced a Deezer premium bundle in its mobile and ADSL tariffs that garnered 1.2 million subscribers just over a year after launch.

Orange noted a year after introducing its app bundles that "the digital experience is above all about content." At Congress, J K Shin, head of Samsung's mobile business, said that "consumers do not want eye-popping technology or the most complex technology" and that focus should be on user experience.

The phone also includes a more advanced version of the S Health application for use with Samsung's wearable gadgets. Several of the applications and services bundled with the Galaxy S5 are fitness-centric, with a view to incentivise consumers to use these apps and services and consume more data. With the range of new services from adjacent industries that are about to hit the high street, bundles will play an ever increasing role for both vendors and operators.

Devices: Breaking the smartphone price barriers

A number of announcements at Congress showed industry efforts to introduce a wider range of affordable smartphones, including 4G-enabled devices. Yet, talks of a \$25 smartphone attracted most of the attention, notably with operators echoing the importance of reaching such low price points in emerging markets.

Key points

- Chinese chipmaker Spreadtrum announced what is claimed to be the industry's first chipset for a \$25 smartphone in partnership with Mozilla
- During a keynote, Manoj Kohli, Managing Director and CEO of Bharti Airtel, said emerging markets typically had between 3% and 7% smartphone penetration, and he welcomed moves to bring prices down. "People cannot afford them" he said adding that "\$25 is the sweet spot for emerging markets [...] if we hit this sweet spot then we are getting there"
- In parallel, Gopal Vittal, CEO of Airtel India, flagged up the high price of 4G devices as one of the main barriers to 4G adoption in the country. During a keynote at congress, Vittal said that until prices drop below \$100, LTE would not be significant in India



Viewpoint: A \$25 smartphone on the horizon in emerging markets

Last year at Congress, Bharti Airtel voiced the importance of developing a sub-\$50 smartphone for cost-conscious consumers in emerging markets. At the time, handset vendors were claiming that such price points would prove challenging to hit.

The announcement this year of a \$25 smartphone initiative led by Mozilla and chip-maker Spreadtrum is a major step forward in reaching this long-awaited market requirement.

Spreadtrum's SC6821 is a Cortex A5-based chipset that supports WCDMA and EDGE networks - but not LTE - and includes WiFi, Bluetooth, FM and cameras functionalities, along with web and HTML5 applications. The lack of 4G connectivity is not an immediate challenge as operators are still in the early stages of building up their LTE networks in most emerging markets, notably in Africa. Interestingly, EDGE connectivity is essential for the substantial share of consumers that still access mobile internet services over 2G networks in developing countries.

According to Spreadtrum, such capabilities position this smartphone "at prices similar to much more minimally featured budget feature phones". Low-cost 3G feature phones are widely available across fast-growing markets such as India, but poor battery life tends to be the common issue often noted with such devices. It'll be interesting to see how the performance of low-cost 3G smartphones compare to existing low-cost 3G feature phones, while understanding the medium-term impact that will have on sales of feature phones.

According to Telkomsel, the \$25 smartphone solution developed by Mozilla and Spreadtrum will help the operator "to speed up and enrich the DNA (Device - Network - Application) ecosystem in Indonesia." This statement echoes a recurrent theme at congress to collaborate to give billions of cost-conscious consumers access to affordable mobile internet services.

Devices: Vendors vie for affordability crown

A number of announcements at Congress throw up potential challenges to the Android OS in the affordable smartphone category. Mozilla and Microsoft are both hoping to make inroads into the low-end of the market.

Key points

- Nokia announced the X family of smartphones based on a variant of the Android OS but also incorporating a Nokia user experience and Microsoft services such as Skype, Outlook and OneDrive
- The X is available now for \$123 followed by the X+ for \$137 and the larger screened XL (\$150), both coming in Q2 this year
- Mozilla presented new hardware supporters for its OS, including ZTE and Alcatel OneTouch, as well as operator backers Telkomsel and Indosat for the Indonesian market
- Microsoft announced nine new hardware partners as it looks to build mass-market momentum
- On other related announcements, Orange announced two new own-branded LTE smartphones, built by Huawei, that will be priced at €150 and €230



Viewpoint: A balancing act for Nokia

Nokia's aim is to convince smartphone users in emerging markets of the attractions of Microsoft services such as Skype and Outlook by bundling them with the Android OS. Blurring the line even more, the home screen of the Android-based Nokia X has been designed to look like Windows-Phone tile-based interface.

The Finnish vendor is introducing users to the world of Android apps while hoping what they will really want are Microsoft's own services. But that is not the only balancing act Nokia is performing. Nokia's Stephen Elop was careful to explain in Barcelona how the new X family will be priced below Nokia's existing Windows Phone-based Lumia range, which is aimed mainly at western markets. And he does need to tread carefully - the bestseller in the Lumia range is the 520 which also happens to be the lowest priced.

On price neither the X nor Lumia smartphones can touch what Mozilla hopes to pull off. At first sight Mozilla appears to have trumped its rivals - it's hard to argue against a \$25 smartphone. And Mozilla thinks such devices will have a radical effect when they come to market later this year. It may be priced like a feature phone, but the Mozilla smartphone will have superior characteristics such as HGVA screen and access to apps.

COO Jay Sullivan said it represented "a whole new category of smartphone". He might be right but will users find it as compelling as higher priced rivals such as Nokia's X family?

Getting cheaper smartphones into the hands of cost-conscious consumers in emerging markets is in itself a great commitment and achievement, but one that do not suffice. As expressed in the previous slides, the most valuable proposition is one built around content and user experience to fuel greater mobile internet usage - one area that Nokia is addressing through Windows services.

Devices: Wearables, the latest “must have” devices for the digerati

Building on one of the main themes of the consumer oriented International CES in January 2014, wearables were centre stage at Congress this year, with one – Samsung’s Gear Fit – even picking up the ‘Best In Show’ award. Increasingly, top-tier device makers are moving into wearables, providing additional colour to contrast with a smartphone market where true customer experience innovation is often lacking.

Key points

- Samsung used the event to unveil a number of wearable devices. In addition to the Gear Fit smart band, it also showcased its second-generation Gear smart watches
- Huawei showcased its TalkBand, which it describes as a “hybrid talk and track” mobile companion, and features a Bluetooth wireless earpiece to offer voice support alongside its fitness tracking features
- First announced at CES, Sony said its SmartBand SWR10 and Lifelog app will be available imminently in more than 60 markets worldwide, describing the product as “the first product within the SmartWear Experience vision”
- Telefonica announced a partnership with LG, Samsung and Sony to integrate its services into wearables, noting it is “open to reach agreements with other market players, manufacturers, content providers and/or companies in the fashion industry”
- As differentiation in the smartphone space becomes increasingly difficult, top-tier vendors are looking to wearables as a way to bolster their positions – and generate additional revenue on top of often low-margin handset sales



Viewpoint: Wearables need to evolve to build mass-market appeal

Despite the buzz surrounding Google Glass last year, generally the market appears to have settled on two preferred form factors: smart watches and smart bands (with some products moving toward straddling both). The former is not a new category, although it has hardly been overburdened with success so far. Perhaps the most interesting development in this space is Samsung’s choice of Tizen to power its Gear devices – enabling it to claim continued support for the platform, while not being so hamstrung by its lack of apps.

Smart bands benefit from the fact that they are generally being positioned as smartphone companions, meaning much of the intelligence is offloaded onto the senior device – enabling a lower bill of materials, and therefore lower price points. But there are a number of challenges to overcome. Battery life in some first-generation products is poor, and in many cases the hardware design is not appealing enough to become a mass-market proposition.

There are also challenges in driving long-term engagement with wearables, particularly with regard to smart bands. While these devices are proving appealing to the fitness-conscious, there is little evidence that these can support additional use cases which could drive wider adoption. Sony’s Lifelog app is a good first attempt, and vendors really need to look to drive innovation in supporting apps in order to appeal to a wider customer base.

The increased presence of vendors such as Sony, Samsung, LG and Huawei in the wearables space could create challenges for specialised players such as Pebble (smart watches) or Fitbit (smart bands) which, while having first-mover advantages, are now faced with competition from companies which can potentially deliver scale quickly. And it is also unclear if there is scope for operators to benefit from the growing interest in wearables. Telefonica’s partnership with LG, Sony and Samsung will be interesting to watch, as it looks to ensure the operator is not sidelined in the new product category.

Services: Connected everything

For the second year in a row, Internet of Things (IoT) solutions featured heavily during the show. The GSMA's Connected City showcased mobile connected solutions for a range of services comprising health, retail, transport, smart home and smart cities, together with partners including Deutsche Telekom, AT&T, KT, Vodafone, IBM and Orange.

Key points

- Sensing Control Systems launched a new enControl M2M solution, which integrates automation, energy management and security features for service providers
- ZTE has showcased its latest smart city solution iCity which is now being used in over 40 countries and in 108 cities in China
- KT demoed its Smart Home solution, an intuitive digital home control solution providing intelligent security and smart metering services using just a home hub and cloud services
- Libelium released a smart water wireless sensor platform to simplify remote water quality monitoring, Waspnote Smart Water
- The Spanish company Nostrum Empresa launched a vending machine that allows a customer to buy goods using a phone app or voice command (using Google Glass connected spectacles), without having to key anything into the machine or insert cash
- Health solutions were also being demoed during the show, notably with a first appearance from fast moving consumer goods (FMCG) giant P&G that introduced its first 'connected toothbrush' - under the Oral-B brand - as it looks to introduce a series of 'quantified self' products to the market
- Cityzen Sciences showed off a sports shirt embedded with multiple sensors that can monitor a player's heart rate and physical positioning around the pitch or field

Viewpoint: Consumer relevance is the key to IoT success

The Internet of Things (IoT) is a broad vision of a 'connected life' where everything — objects, machines and people — is connected and communicating, uniting the physical and digital worlds. This phenomenon was recently illustrated by Google's \$3.2 billion acquisition of Nest Labs, a maker of smart thermostats and smoke and carbon monoxide detectors.

During his keynote speech Cisco CEO John Chambers described IoT as "about connecting things together through sensors in a way that helps the consumers" and that the technology shift to IoT "would have a five to ten times' greater impact on our lives than the impact of the internet." He added that vendors ought to ensure they are constructing products on a consistent underlying architecture because "the trick for winning in the home is to make things easy for the consumer to connect everything."

Such is the idea behind AT&T's Digital Life, an end-to-end solution for home automation and energy management. It is available now in the US but the operator is in talks with global service providers to offer a white-labeled solution for home automation and security system. Digital Life won 'Best Consumer Mobile Service' at the Congress awards.

Qualcomm also showed off its vision of Connected Smart Home that uses devices from the AllSeen Alliance member companies, which are based on the AllJoyn platform. AllJoyn is an open source project that allows various manufacturers build different devices, which can communicate with one another. The AllSeen Alliance was set up in 2011 by Qualcomm; members include Haier, LG, Panasonic, Sharp, as well as HTC, and AT&T Digital Life.

Services: A Global embedded SIM to drive IoT and M2M scale

Building up on the momentum kicked off at last year's event, the automotive industry was ever so present at Congress this year with a major announcement from Jasper Wireless, which unveiled its Connected Car Cloud and Global SIM solution.

Key points

- In addition to signing up two new operators to its M2M platform, Jasper Wireless unveiled its Connected Car Cloud and Global SIM, which is aimed at car makers
- “When IoT is included in the car, the customer experience becomes awesome,” Jasper CEO Jahangir Mohammed said at a keynote panel session
- Nearly all major automotive OEMs demonstrated connected car solutions, and also a number of technology vendors presented connected car applications and platforms
- Ford unveiled its research car that will be used to develop advanced, and eventually, fully automated driving technologies
- Ford also unveiled its new Focus, the first European Ford vehicle to offer the SYNC 2 voice-activated in-car connectivity system
- AT&T announced that three additional companies have signed up to work with the AT&T Drive Studio, a connected car centre for innovation and research in Atlanta. Glenn Lurie, President of Emerging Enterprise & Partnerships for AT&T commented: “This is an exciting ecosystem and we are committed to leading the way to take the connected car to the next level for auto manufacturer partners and their drivers”

Viewpoint: Global embedded SIM solutions to speed up IoT rollouts

With 428 mobile operators currently offering a wide array of M2M services across 187 countries worldwide, the need for a global embedded SIM solution has been a hot topic at Congress.

A number of initiatives today focus on providing a secure interoperable global service that has the potential to scale IoT deployments of smart meters, connected cars, home security systems and other applications.

Last December, the GSMA unveiled the technical specifications of its embedded SIM architecture. The GSMA worked with operators and SIM suppliers from around the world to create a common, secure, interoperable architecture to facilitate the commercial deployment of systems that enable remote over the air provisioning and management of this new SIM.

Similarly, Jasper Wireless announced at Congress its partnership with Giesecke & Devrient to deliver an end-to-end solution for a global SIM, enabling enterprises to manage a single embedded SIM by remotely provisioning and managing mobile operator profiles and policies for that SIM anywhere in the world.

These global embedded SIM solutions are tackling the operational cost challenge that IoT providers with international footprints face when developing global services.

This solution is likely to play a critical role in driving scale in the automotive M2M solutions that are gaining momentum in ‘digital pioneer’ markets such as the US. With M2M connections representing just around 3% of global connections in 2013, such solutions can imply an inflection point in the adoption curve of M2M connections in the future.

Services: SIM authentication to power future digital identity

This year at Congress the industry introduced a standardised mobile identity solution that aims to become the de facto single sign-on tool that consumers could rely on to authenticate themselves in both online and offline environments. This initiative is set to stimulate adoption of mobile services that rely on absolute confidentiality, such as healthcare, government and banking. The announcement of 'Mobile Connect' came alongside a number of other partnerships unveiled at the show aimed at accelerating the uptake of digital commerce services via mobile solutions.

Key points

- MasterCard announced its partnership with operators in Germany (Deutsche Telekom, Telefonica and Vodafone) that will help operators collaborate with banks to facilitate the development a new mobile payment platform based on secured NFC solutions
- CaixaBank announced its partnership with operators in Spain (Telefonica, Vodafone, Orange) and Visa to deliver its NFC-based mobile payment service, enabling consumers to download in minutes debit, credit or prepaid Visa cards onto their SIM through a secure and certificated process
- During a keynote at Congress, international retailers voiced their interest in replicating the US-based Isis model onto other countries. Spain's Dia supermarkets and India's Infiniti Retail have described the Isis mobile wallet approach as being the right one
- Four Asian operators launched at Congress the Asia NFC Alliance to drive the development of NFC-based services across the region. The coalition consists of Japan's KDDI, Taiwan's Chungwa Telecom, HKT (Hong Kong) and SK Planet of South Korea

Viewpoint: Operators collaborate to scale mobile identity solutions

Mobile Connect is backed by 12 leading operators including Axiata Group Berhad, China Mobile, China Telecom, Etisalat, KDDI, Ooredoo, Orange, Tata Teleservices, Telefónica, Telenor, Telstra and VimpelCom, as well as key industry players such as Dailymotion, Deezer, Gemalto, Giesecke & Devrient, Morpho, Oberthur and VALID.

This web-based authentication service runs on the OpenID Connect protocol, ensuring interoperability across mobile operators and service providers. The identification solution being developed will use the subscriber's mobile phone number or mobile user name and information contained in the secure SIM card, meaning that consumers will no longer need to create and manage multiple user names and passwords.

At a strategic level, the Mobile Connect service establishes the SIM card and the mobile medium as a frontline identity management service provider, allowing mobile operators to participate in the critically important e-commerce market. In the longer term, this type of standardised mobile identity solution will help operators to derive substantial revenues from their presence in fast-growing e-commerce markets, notably by extending the reach and presence of operators' brands, raising levels of awareness and ultimately, improving loyalty.

A number of operators have stated that Mobile Connect services will be made available to their customer base in 2015.

It is important to note that given the highly secure capabilities of the SIM, mobile phones could become the perfect tool for future Digital Identity, not only for digital use cases but also for authentication in offline environments (national ID card, airport check-ins, etc). This makes Mobile Connect ideal in a range of environments (both online and offline), yet this web-based authentication service does not necessarily need to be linked to a SIM to function.

Services: WhatsApp set to launch voice services

Following hot on the heels of its \$19 billion acquisition by Facebook, the announcement by WhatsApp CEO Jan Koum that his company will look to launch voice services was the biggest surprise of this year's show. During his keynote, Facebook CEO Mark Zuckerberg claimed that WhatsApp is on track to reach a billion users. This scale, combined with the fusion of voice and messaging services on a single cross-platform app, could have far reaching ramifications for mobile operators worldwide.

Key points

- WhatsApp plans to launch voice services during Q2 2014, and is looking to partner with mobile operators, having announced a partnership with E-Plus in Germany to roll-out the service in that country
- During Congress, both WhatsApp CEO Jan Koum and Facebook CEO Mark Zuckerberg claimed that WhatsApp will remain independent, will stick to its no advertising policy, and wants to know "as little as possible" about its users
- Koum claimed WhatsApp had 465 million monthly active users, a 15 million increase on the number released at the time of the Facebook takeover a week earlier
- Despite all the hype, WhatsApp is simply following the route taken by other apps that already provide messaging and voice services, such as Skype, KakaoTalk, Viber and WeChat



Viewpoint: Potential to shake up the mobile voice market

With 465 million active users, a reported 330 million daily users, a target of 1 billion users, and an app that is widely used across mobile operating systems, WhatsApp has the scale and ambition to capture a significant part of the mobile voice market.

Given its strong position in mobile messaging, its move into voice is a natural evolution of its service offering, and driving adoption among its user base should prove an easy task. However, as with other internet voice services such as Skype, quality of service will be a concern. Indeed, days after its acquisition by Facebook, WhatsApp suffered an outage that reportedly lasted more than three hours, following which rival app Telegram Messenger reported nearly 5 million new sign-ups for its service in a single day. With this in mind, and in a similar approach to the one taken by Facebook to help drive mobile broadband use in emerging markets, WhatsApp is looking to partner with mobile operators to roll-out its service.

With voice still representing a substantial proportion of mobile operator revenue, the impact on voice revenue is a real concern, but it may not simply be a case that a reduction in operator voice usage minutes equates to a corresponding fall in revenue. Indeed, in markets where operators offer unlimited voice minutes and text messages, the success of VoIP services can be limited.

Following WhatsApp's announcement, the immediate response of mobile operators has been to highlight the fact that regulatory responses are outdated in such a quickly evolving market. Vodafone CEO Vittorio Colao said that "these types of deal are a clear indication that the world is changing and the regulations don't fit anymore", adding that he did not understand how such an important acquisition could go unchallenged at a time when European operators were facing intense regulatory scrutiny.

Services: Working with Facebook to connect the unconnected

The mobile industry used Congress to reiterate its goal of connecting billions of unconnected people to the mobile internet. This was also the central theme of Facebook CEO Mark Zuckerberg's keynote address, which sparked renewed debate around the nature of collaboration between operators and OTTs in emerging markets. A partnership was also announced between internet.org and the GSMA to address this challenge.

Key points

- Zuckerberg aims to get billions online via Facebook's internet.org initiative. He believes a basic internet service (including messaging) should be made available to all without incurring connection fees. This service would act as an "on ramp" to the internet, he says
- Facebook's deals with Filipino mobile operator Globe and Tigo in Paraguay are cited by Zuckerberg as successful collaborations that are delivering free-of-charge Facebook access in emerging markets
- Facebook is looking to sign "three to five" similar deals with operators in the coming year, but does not have the "capacity" to handle more at this stage
- Zuckerberg was unable to set a break-even point for internet.org, noting that Facebook is likely to lose money on it for "quite a while"
- The GSMA and internet.org, announced a joint initiative focused on reducing the total cost of ownership (TCO) of mobile in emerging markets
- The ability to effectively price mobile data will be key to connecting new subscribers in emerging markets. But it is likely that the 'zero rating' of certain content (such as Facebook) will be just one of many new models to emerge



Viewpoint: If you build it, they will come. But who pays?

For a brief period a few years ago Facebook was struggling in the transition to mobile, but it moved quickly to address concerns and spent heavily on acquisitions to fill gaps. Fresh from the \$19bn WhatsApp deal, Zuckerberg came to Congress to negotiate with operators from a position of strength.

Like operators, long-term growth for Facebook depends on emerging markets and Zuckerberg believes his firm can play a role in defining how connectivity is extended to this region, connecting many people to the mobile internet (and Facebook) for the first time. He outlined how the developed world model simply means mobile connectivity is unaffordable in emerging markets and that "dramatic changes" are required.

His solution is to proliferate the type of deal Facebook has already cut with several operators, offering a basic version of Facebook free-of-charge. Zuckerberg points to the success of this model in attracting mobile data subscribers and creating an opportunity to upsell new, paid for, services. ("The benefit of the web is not obvious if you've never been connected before," he says.)

The business logic behind this proposition is questioned by most operators. Zuckerberg appears to see Facebook's internet.org as a philanthropic rather than commercial exercise, noting it is likely to lose money on it for "quite a while". That will not be appealing to emerging market operators that need to invest in licenses, infrastructure and devices.

Some operators have already rebuffed Facebook's 'zero-rating' requests. It may be that 'challenger' operators are more receptive to striking deals in order to quickly build share: Globe's customer base in the Philippines is half that of the market leader (Smart) and according to Zuckerberg the Facebook offer enabled it to double its number mobile data subscribers within just three to four months.

Services: The ongoing rise of big data

Big data has been a headline theme in the technology and mobile space for some time. What was particularly noteworthy at this year's Congress was both the range of speakers and companies referring to big data, as well as the close linkage of the big data opportunity with other key developments in the mobile industry, including the growth in the number of connected devices (the Internet of Things) and the importance of security in the evolving mobile ecosystem. This was a theme for a number of speakers at Congress, with the challenge to understand and utilise all this data for companies looking to add value in both the consumer and corporate spaces.

Key points

- Ginni Rometty, CEO of IBM, commented that both mobile services and enterprises will be revolutionised by the use of big data, describing data as the “world's new natural resource” and that the data would be a key source of competitive advantage for every industry
- The convergence of new developments in the areas of the cloud, big data and mobility opens up a clear opportunity to develop new services and to reengineer business processes. This view was echoed by several keynote speakers at Congress, while the convergence of these factors is increasingly referred to as creating the “third platform” for IT services
- The Open Mobile Alliance is developing standards and specifications for how devices and apps should share data with other connected devices, supporting the development of “interoperable end-to-end mobile services”
- The move towards increasing standardisation is a key element in reassuring consumers and addressing concerns of privacy and security around personal data



Viewpoint: Time for big data to demonstrate its ROI potential

While many companies are focused on the big data opportunity, it has yet to become the business driver that many had anticipated as companies look to clarify the benefits and return on investment in big data storage and data processing capabilities. This was reflected in several comments from operators and other ecosystem players. For example, SK Planet noted that there are already some areas in which mobile operators can use big data to derive business benefits, such as in subscriber churn reduction. However, the company also commented that in many cases it has proved difficult to quantify the ROI on big data investments.

Mobile commerce is one particular area where operators and service providers can potentially deliver tangible benefits from the application of big data analytics. The growth of m-commerce is creating large amounts of information on consumer behaviour and choices, which can be used to offer more personalised services and offers. SK Planet stated that “our Cash Bag m-commerce portal should generate \$9.3 billion in revenues this year, and by using big data analysis we can provide customers with a much improved experience, and not based simply on offering the lowest price.”

The growth of connected devices, particularly in areas such as the home or in the car, presents new opportunities but also challenges for operators and other ecosystem players. Users may be willing to share data with service providers but on the basis that the data is used securely. One operator commented on “the need to ensure that the subscriber understands the positive benefits of sharing information”.

With many sessions at Congress focused on the combined potential of the explosive growth in connected devices and the development of big data analytics, it is clear that the industry is aware of the potential of big data. The challenge now is to begin to realise this potential by developing new services and business processes that can benefit consumers and corporates alike.

About GSMA Intelligence

GSMA Intelligence is the definitive source of mobile operator data, analysis and forecasts, delivering the most accurate and complete set of industry metrics available.

Relied on by a customer base of over 800 of the world's leading mobile operators, device vendors, equipment manufacturers and financial and consultancy firms, the data set is the most scrutinised in the industry.

With over 13 million individual data points (updated daily), the service provides coverage of the performance of all 1,140 operators and 1,153 MVNOs across 3,505 networks, 65 groups and 236 countries worldwide.

The GSMA Intelligence team comprises 30 analysts based worldwide. It is led by Tom Johnson — Head of GSMA Intelligence — and Hyunmi Yang — GSMA's Chief Strategy Officer.

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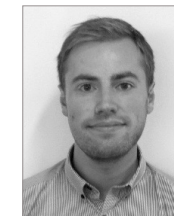
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