2015 predictions for Wi-Fi

By Michael Fletcher

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We now live in a data-centric, wireless world, and no technology is better suited to address this reality than Wi-Fi. In fact, global hotspot* numbers are expected to grow to more than 340 million - that's nearly one hotspot for every 20 people on Earth by 2018. That compares to one Wi-Fi hotspot for every 150 people today.

The smartphone revolution continues to remake the wireless landscape as users in all geographies and all socio-economic groups flock to these devices that can do so much more than place a voice call. What's more, efforts to solve the roaming issues, such as through Hotspot 2.0, are making the roaming experience more like cellular - which ultimately means more uptake, ease of use and convenience.

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As a result, Wi-Fi in many ways is fast becoming a utility. It's like running water or electricity - you expect it to be there, and if you don't have it, you are at a serious quality-of-life disadvantage.

Looking into 2015, we believe the state of the Wi-Fi industry continues to look positive and here's what the we think we're likely to see globally and in Africa.

Predictions for Wi-Fi in Africa

- 2015 will hail in more public Wi-Fi. The requirement is growing across public venues, stadiums and general consumer areas and this demand will likely be driven more by social media this year as consumers require more and more access. Social media driven Wi-Fi models will be free in some form or another as the freemium model will likely be used to drive uptake.
- The public sector will continue to see the benefits that Wi-Fi can bring, and rather than just allocating budgets to a single venue or geographic area, we are likely to see an increase in entire towns and cities that are looking to get connected. Huge strides have already been made in Tshwane, for example, and we are likely to see an increase in connected city initiatives in Cape Town and Johannesburg - not to mention African countries including Uganda, Kenya and Rwanda.
- Wi-Fi calling will come to the fore and it's definitely going to be a game changer in terms of service provider business models. With 'just Wi-Fi enabled' phones being launched and automatic connection to Wi-Fi becoming easier, the last piece of the puzzle - voice calls over Wi-Fi - is imminent. We are entering a 'Wi-Fi first' movement as more and more mobile devices automatically sign onto Wi-Fi first, and fall back to 3G or LTE only if Wi-Fi connectivity is not available or usable.
- Premium Wi-Fi smartphones - While the dominant market share of leading smartphone vendors such as Apple and

Samsung is not quite at the same level in Africa as it is in developed countries, it's still interesting to see how their products need to diversify for emerging markets. As such, if you look at vendors such as Republic Wireless, who offer unlimited talk and text over Wi-Fi for $5 per month, it would seem highly probable that the premium cellphone vendors will look to develop Voice over Wi-Fi enabled phones at a lower entry point for emerging markets.

Predictions for the Enterprise

- 2015 will be the year of 802.11ac. Now that the consumer market and handhelds with 802.11ac technology are common, enterprises, workplaces, organisations and schools are rushing to support it. The adoption of consumer 802.11ac smart devices combined with the continued growth of BYOD is forcing organisations to migrate to 11ac-supported Wi-Fi infrastructure sooner rather than later.
- Monetising the WLAN has traditionally meant charging for WLAN usage. Today, organisations have the option to add services such as analytics, location, advertising, and marketing as new forms of monetisation. These services can greatly benefit the organisation or business to better understand basic things such as WLAN trends, customer movement, and demographics. We will see continued growth of these new ways to monetise Wi-Fi infrastructure investments in 2015.
- The never-ending drive to cut costs in data centres by reducing real estate and facilities expenses continues to drive the demand for virtualisation. For wireless, virtualisation provides another level of resiliency that is tied into the data centre high availability model. Virtualisation also lowers the CAPEX for many technologies, which opens the doors for managed services.
- The cloud will continue to provide Value Added Resellers (VARs) with easy-to-deploy services to customers that prefer 'wireless as a service.' Small businesses will be able to receive enterprise technology such as location-based services (LBS) and secure guest access.
- Hotspot 2.0 based technology (e.g., Passpoint) will continue to be adopted by vertical markets that provide public Wi-Fi access such as hospitality and transportation, as well as general enterprises. With Hotspot 2.0, more and more customers will be able to seamlessly and securely roam on Wi-Fi networks.

Predictions for carriers/service providers

- Service providers will accelerate their move into the Wi-Fi managed services market as a way to generate incremental revenue, strengthen their relationships with customers; up-sell other services, and set the stage for new offerings (including an LTE small cell service from the MNOs).
- Network Functions Virtualisation (NFV) will continue to sweep through the WLAN industry. This trend started in the spring when, for example, Ruckus announced the virtual SmartCell Gateway (vSCG), and it continues to pick up steam. It requires a significant operational change for service providers, but the economics of virtualisation are very compelling.
- Wi-Fi Calling will start to become important in 2015 thanks to support from Apple. This technology (3GPP IR-92) will drive even greater amounts of smartphone traffic onto Wi-Fi networks, and will fundamentally alter the MNO business model. Wi-Fi Calling will also kill the femtocell market.
- Cable MSOs will accelerate their broad-based Wi-Fi rollouts as a way to keep their subscribers happy and make them much less likely to churn. Cable MSOs in all parts of the world now view Wi-Fi as strategic to their businesses.
- 2015 will be the year in which we see large scale Hotspot 2.0 roaming consortiums begin to form, primarily around large Cable MSOs. These consortiums will knit together the islands of connectivity that constantly surround us into one seamless and secure network experience.
- 802.11ac Wave 2 will be the next Wi-Fi standard for service providers and it will roll-out in 2015. It introduces multi-user multiple-input and multiple-output (MU-MIMO), which allows a Wi-Fi access point to talk to more than one user at a time.
- Home-spots will become a standard offering from wireline providers worldwide. This approach will dramatically increase Wi-Fi footprint and thus increase the utility of these offerings.
- The LTE Small Cell market will continue to develop very slowly as the industry struggles with business model issues around who pays for indoor deployments. Most of the excitement around LTE small cells has focused on the indoor market as that is where the people are, but the economics point toward venues having to pay for these deployments.

That seems unlikely without a neutral host LTE small cell.

- LTE in the unlicensed bands (aka LTE-U) generated lots of discussion in 2014. The technology will be a success IF 3GPP implements Listen-Before-Talk so as to be a good neighbour for Wi-Fi. 2015 will see significant progress in this direction.

The bottom line is that Wi-Fi is the perfect solution for the data challenges that are coming from a worldwide infatuation with, and insatiable demand for, more and better wireless data services of all types - 2015 will mark the perfect wireless storm.

**iPass report: Public hotspots to grow to 340M worldwide by 2018*

ABOUT MICHAEL FLETCHER

Michael Fletcher is sales director for Ruckus Wireless sub-Saharan Africa, a position he assumed in July 2010. In this role, Michael is responsible for the day to day operations of Ruckus Wireless - focused on identifying and increasing the company's partner footprint across Africa, exploring new business opportunities and driving the company's revenue and customer outreach locally. Contact details: email michael.fletcher@ruckuswireless.com | Twitter @MichaelFletch55

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