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Emerging Wireless in the Post-Promethean Age

By Tim Young

In the saga of wireless communications growth, the age of Prometheus is drawing to a close.

For those of you who have lapsed in your study of ancient Greek mythology, Prometheus was a Titan and the brother of Atlas, bearer of the heavens.

Most notably, it was Prometheus who stole fire from Zeus and brought it to mankind (and was brutally punished for this transgression… but that's a topic for another day).

This gift fundamentally altered the way in which mortals conducted their daily lives. The light. The heat. The utility. The beauty. A post-Promethean world was enriched in countless ways, and all Prometheus had to do was deliver a simple technology.

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And that's the way wireless communications have worked in emerging markets for years and years. Build a tower, distribute prepaid handsets, and deliver low-ARPU voice service to subscribers thrilled to have any semblance of connectedness to the outside world.

However, just as markets like Japan and North America matured, and penetration rates turned into saturation rates, so too has the communications market complicated in the developing world. For so long, massive growth rates have fueled the mobile expansion into emerging markets. Areas that lacked a proper communications infrastructure were numerous. Some were areas where harsh terrain prevented a conventional wireline infrastructure from being a practical goal. Other areas lacked the governmental stability or elite will to support such development. Still others saw network infrastructures laid during periods of colonial occupation, only to have later factions dig up the network itself, strip the wires, and sell the whole mess for its weight in scrap copper.

If there's a more compelling image of the ins and outs of post-colonialism, I don't know where you'd find it.

However, this age of massive numbers of new subs is drawing to a close in much of the world. A recent report by Wireless Intelligence notes that the world has a new second-largest mobile market, in terms of the number of regional wireless connections. While Asia-Pacific is still the undisputed leader in terms of its number of connections, the new number two is Latin America. It sports 530 million connections.

The former number two, Western Europe, actually saw a decline in the number of wireless connections, according to Wireless Intelligence.

And it's not just about raw numbers. Latin America has a penetration rate that analysts expect to reach 90% by the end of 2010, with Brazil closing in on 100% penetration.

Those are serious numbers.

When it comes to exploring the emerging wireless market, perhaps the most compelling frontier, geographically, would have to be Sub-Saharan Africa. In an era of increasing penetration, there is still a great deal of growth potential in much of the region. An analysis by Business Monitor International shows that even in the 22 larger, more developed markets in the region, mobile penetration is estimated at 55%. (By

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contrast, the European Commission reports that the EU had a 119% penetration rate in 2009.)

However, that's only part of the picture. BMI notes that their analysis did not extend to the least developed markets in southern Africa, and that states such as

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Niger, Chad, and Malawi have much lower usage rates, bringing the continental saturation rate down to 30%.

Furthermore, as a recent story in Wired outlined, what wireless service does exist is being put to ever-greater use. In that story, a new model for using a mashup of Google Maps, cloud software, and SMS texts is being used to track inventory for medical clinics fighting Africa’s horrendous malaria epidemic. The program, sponsored by IBM, Novartis, and Vodafone, helped increase the ability of anti-malaria groups to ensure that a particular remote clinic was properly stocked by 300%. Hundreds and hundreds of lives are estimated to have been saved thanks to text messages and fairly simple software maintained thousands of miles from the clinics.

So, with cutting-edge thinking like this, and the basic needs of most potential subscribers rarely going beyond the essentials, there still may be an opportunity to excel in many of these markets simply by delivering basic voice and text service. However, even in these settings, there seems to be more to the story. The demand for mobile data is growing, and technologies like WiMAX are creating a whole new narrative in the realm of wireless for the developing market.

For instance, while the BMI study notes that Malawi is one of Africa’s least developed markets, WiMAX provider Burco Electronic Systems Ltd. Launched its eWiMAX service there in 2010. While not the first WiMAX provider to roll out WiMAX service in the small, landlocked country, one of Africa’s most densely populated, it did boast the largest coverage area.

Jonas Lagerquist of Aptilo Networks, which provided OSS/BSS support for Burco, noted in a case study that there were several specific support system considerations that accompanied Burco’s Malawi rollout. Flexibility, for example, is particularly necessary in markets that often prove as remote as they are dynamic. Furthermore, a multi-vendor approach is encouraged, as Lagerquist noted that it “minimizes the risks if a vendor for some reason leaves the market and ensures a healthy competition from vendors to drive down costs”.

However, at the moment, it is in emerging markets that the single-vendor approach may be the most compelling.

It has been noted by industry analysts like Analysys Mason’s Mark Mortensen that a newer breed of OSS/BSS vendor has begun to crop up with a focus on emerging markets and a broad slate of services for CSPs to grab hold of. Vendors in this mode (Clarity and Comarch are of particular note) may be jacks-of-all-trades, but their pre-integrated software components save on systems integration costs and are perfectly suited to the Greenfield environment of emerging market play.

However, other takeaways from Burco’s foray into one of the least likely markets, according to Lagerquist, stress the importance of policy control and billing structures suited to the specific needs of the market.

Most developing markets necessitate a prepaid charging scenario, but arranging for ease of payment is paramount. For Burco, that meant understanding that most customers in Malawi were accustomed to paying bills through bank accounts via ATMs, so the integration of a voucher system into the existing ATM network created the best environment for easy payment.

In other markets, users may or may not even have bank accounts, which can serve as a hindrance or an opportunity for wireless providers. An uncreative provider would scramble to understand how this lack of external banking may impact their business. A wise carrier would see it as an opportunity to provide financial services directly to customers.

Understanding what sort of market one is encountering is of obvious importance, but every few years, we hear of another CSP who rushed into a region without proper preparation, and committed some blunder. It still happens.

As the wireless provider has gone beyond its Promethean days, it has likely grown a few competitors over time, whether external providers spotting an opportunity or in-country upstarts eager to knock off the incumbent. Therefore, customer experience cannot be any less important on the most remote island than it is in the largest North American city.

As the last low-hanging fruit gets plucked, providers must learn how to turn their expeditions into emerging markets into long-term relationships with markets that entertain ever-increasing complexity.