

Flat fees: WiMAX operators need to tread carefully

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The clear trend in mobile data is towards flat-fee unlimited plans. Asia-Pacific and North America have lead the way in 3G networks and the rest of the world is following. Even unlimited, flat-fee voice plans have been introduced in the market. Subscribers like flat-fee plans as they do not have to worry about added fees at the end of the month. Cellular operators are glad to see data plans finally take up—although data-only plans for laptops typically account for less than 1% of mobile subscriptions, so this is still a niche market.

So what's wrong with flat-fee contracts? As long as few subscribers use a network, capacity is not an issue and operators can afford to be generous. As usage grows, however, flat-fee unlimited contract can quickly erode profit margins. Increased traffic requires expensive infrastructure upgrades (a denser network of base stations) and higher

operating expenses (more backhaul traffic to carry, more base stations to operate and maintain).

Even if costs are not an issue (and that's rarely the case), spectrum is a limited and expensive resource. Even as 4G technologies like WiMAX or LTE become more spectrally efficient, physics still imposes limits on the traffic that can be transported within the available allocations.

While cost and spectrum constraints affect operators regardless of the technology they use, WiMAX operators face tougher challenges in dealing with flat-fee contracts. In all cellular networks, voice makes up the majority of traffic and this keeps volume under control (there are just so many minutes per month individual subscribers are willing to spend on the phone). With data

dominating in WiMAX networks, operators are already seeing high traffic levels.

This is due to multiple factors. Unlike cellular subscribers, most WiMAX subscribers use devices that encourage high data usage (e.g. laptops versus phones) and often view their subscription as an alternative to a primary DSL-like broadband connection. Similarly to wireline operators, WiMAX operators are seeing high levels of peer-to-peer traffic and real time content streaming.

In most cases, it is only a few subscribers that use most of the bandwidth. In the USA, 5% of cable modem subscribers use 50% of bandwidth according to Time Warner Cable. Managing outlier subscribers has to be one of the main priority to manage subscriber traffic, but we do not think that it is sufficient to protect WiMAX networks—or more generally wireless networks—from congestion.

In private, operators acknowledge that flat-fee unlimited access will eventually become a major liability, and that it will be difficult to backtrack and add traffic caps without major cuts in prices. But how can they counter a trend that is so well established? How can WiMAX operators compete with 3G cellular operators if they have to impose traffic limitations to their subscribers?

It is a real challenge. It may be tempting to wait until the problem becomes pressing, but some of the leading operators have wisely started thinking hard about the issue. There are different approaches that can be used to address the dangers of flat-fee unlimited access without having to abruptly terminate it or imposing unacceptable limitations, but operators have to tread carefully to avoid damaging their brand and subscriber experience.

The primary line of action is network management. For most fixed and mobile broadband subscribers, traffic is a best effort deal: bandwidth and network resources equally shared among subscribers and this means that for consumer subscribers the level of service is highly variable. WiMAX operators can use many tools to manage traffic more aggressively, using Quality of Service (QoS),

prioritized access, and flow-based processing. This enables the operator to allocate network resources based on who the subscribers are and which applications they are using within the context of the overall traffic level in their coverage area. For instance, peer-to-peer applications will be able to use more bandwidth in the middle of the night, when traffic levels are low. High-paying business subscribers, however, can have priority when they check their email during peak hour. Active traffic management can improve the perceived network performance and allow operators to segment the market more efficiently. For instance, a low-cost package may attract consumer users who may not mind a slow network at peak hours, but want the service to be affordable.

Traffic caps are another way to contain traffic, but they can negatively affect the perception of the service offering, even though they have no impact on most subscribers, as their usage levels are below the limits. As long as they are reasonable and only meant to prevent unfair network use, traffic caps can be introduced successfully provided that the proposition is well articulated to subscribers. Traffic caps actually benefit the majority of users to the detriment of few heavy users. More importantly, however, operators need to develop transparent, consistent, easy to understand charging model and allow them to monitor traffic levels in a straightforward way. Traditionally, this is has been a challenge for cellular operators. Regardless of whether they are flat-fee or usage-based, the fine print on data plans from almost all operators is fiendishly difficult to understand.

This gives yet another opportunity for WiMAX operators to gain ground over cellular operators as long as they are able to leverage both technology and marketing tools to offer a more compelling service that takes into account the different subscribers service requirements in different market segments. And it may not be unlimited or have the same features for everybody, but they can still call it flat-fee.

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At Senza Fili we have in-depth expertise in financial modeling, market forecasts and research, business plan support, due diligence, white paper preparation, training, and evaluation of end-user requirements. Our clients are international and span the entire value chain; they include fixed and mobile operators, ISPs, wireless ISPs, other service providers, vendors, solution providers, system integrators, investors, and industry associations.

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