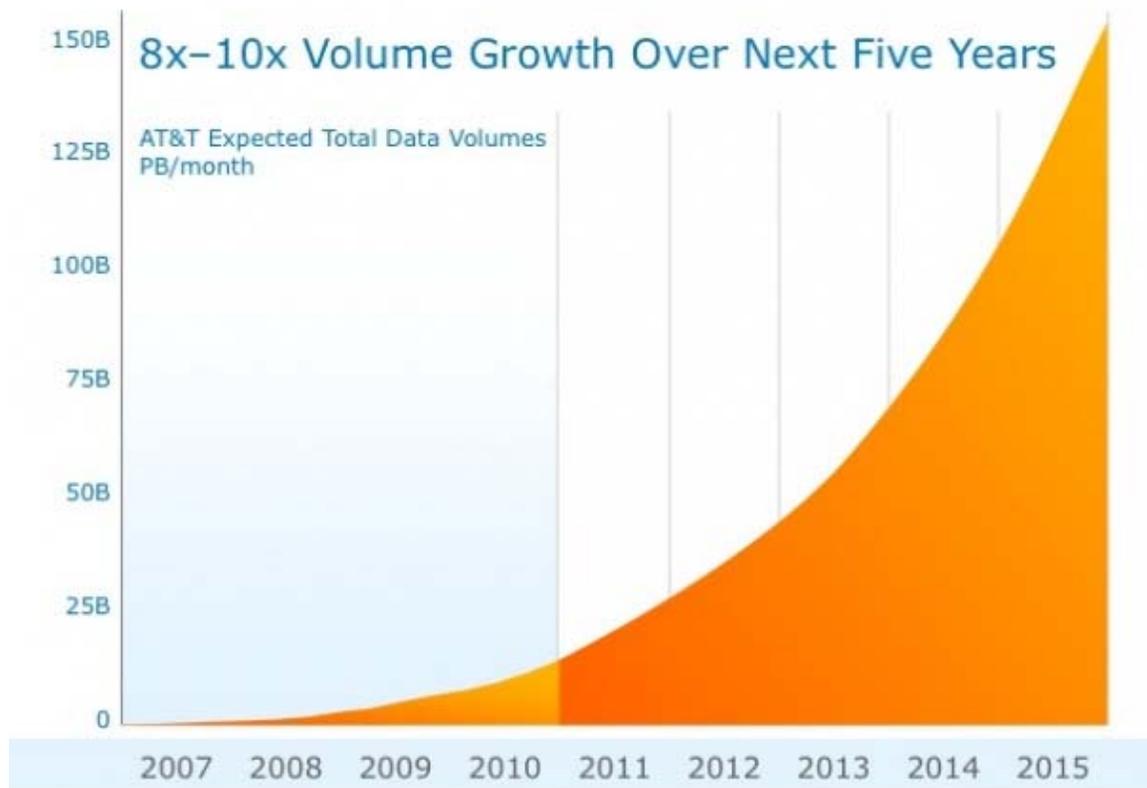


What to make of AT&T's vanishing spectrum crisis

Is AT&T failing to keep its story straight about the need for more spectrum, or is it just that the popping of the spectrum bubble has taken them by surprise as well? Recently the nation's second largest operator has seemed to back off from some of its more aggressive claims about how fast data traffic was growing.

As Dave Burstein of Fast Net News [first highlighted in late January](#), AT&T's senior management told investors on two separate occasions last month that "The [base increase of data consumption](#) right now is growing 40 percent a year," and "LTE does give us a [30 percent to 40 percent lift](#) in network efficiency, but at current growth rates, that equates to only about a year's increase in traffic". Remarkably that 40 percent figure is not only far less than the growth rates projected by Cisco and assumed in the [FCC's October 2010 working paper](#) (which argued that [300MHz of additional spectrum](#) was needed by 2014), but it also contrasts dramatically with the figures AT&T itself presented when it announced the planned takeover of T-Mobile in March last year.

In that March 2011 presentation AT&T projected that data volumes would grow by 8 to 10 times between the end of 2010 and the end of 2015, based on an expectation that volumes would roughly double in 2011 and then increase by a further 65 percent in 2012. However, if we instead project out the current 40 percent increase in data consumption that AT&T is seeing then volumes would only increase by 5-6 times by 2015. Ironically, if that rate of growth was applied to the FCC's October 2010 model, all of this data traffic would easily be accommodated for the rest of this decade by existing spectrum allocations under the FCC's own assumptions of new cell site deployments and spectrum efficiency gains from new technologies.



Why might AT&T's data volumes have fallen so far short of the growth expected less than a year ago? Two obvious explanations stand out: it seems that **offload to Wi-Fi** is becoming far more successful than many expected, and AT&T is now **cracking down on the top 5 percent** of users of its unlimited iPhone data plans.

With those “power users” consuming on average 12 times more data than other customers, and doing bizarre things like turning off Wi-Fi to save battery life **while watching Netflix movies**, it's pretty easy to see how even a modest effort should reduce AT&T's network loading significantly.

Of course, going forward AT&T would still find it much easier to increase the capacity of its LTE network by using additional spectrum rather than going through the messy process of refarming PCS or 800MHz spectrum from GSM to LTE. Now that AT&T has handed over much of its AWS holdings to T-

Mobile as part of the break fee for that deal, AT&T would need look elsewhere for this spectrum.

So it's hardly surprising that AT&T has been vocally proclaiming its opposition to the FCC placing any restrictions on participation in future auctions or on other potential acquisitions. However, with plenty of near term headroom on its new LTE network, the primary focus is likely to be on AT&T's spectrum needs in 2015 and beyond. A time frame that will include its potential build out of an [LTE-Advanced network](#).

Ultimately, as many ([including myself](#)) have been speculating, it therefore probably does make most sense for AT&T to end up in bed with DISH Network and use its relatively clean 2x20MHz of satellite spectrum for LTE Advanced. This assumes the FCC allows this spectrum to be repurposed for terrestrial services in the near future.

It could be argued that if demand growth is slower than previously expected, then AT&T might hold off on a decision for another year or more to see what happens with other spectrum bands (such as broadcast TV and AWS-3). On the other hand, if DISH's alternative plan could potentially bring together other players like MetroPCS and even perhaps DirecTV to create a rival 4G network, AT&T may believe that now is the time to cement its dominant position alongside Verizon in the wireless industry. Thus ensuring that no-one else will ever be able to come close to the spectrum holdings and network coverage of these two players.