NetworkWorld

Most exciting iPhone 4 features will be marred by poor networks

Hardware innovations are outpacing the infrastructure

By Keith Shaw on Mon, 06/07/10 - 5:08pm.

Normally, I'd probably be excited about today's iPhone 4 announcements, and its new features – especially the 720p video recording, the video chat (Apple calls it FaceTime) and even the availability of watching Netflix on the iPhone. What bugs me is that hardware innovations introduced by Apple have surpassed the mobile network's ability to support these features.

It's not just AT&T and it's much-maligned 3G network that has me worried – at today's Steve Jobs WWDC keynote, attendees using Wi-Fi overloaded the network and prevented Jobs from performing some of his demos. At a couple of points during the keynote, Jobs had to ask all of the livebloggers to shut their Wi-Fi off in order for him to continue the demos. Unbelievable!

It's no wonder that AT&T made its announcement last week regarding new data plans, dropping the "unlimited" from them – they must have seen the new innovations and the amount of bandwidth they would have needed. Can you imagine the waves of people on June 24th trying to use these new bandwidth-intensive applications on the AT&T network if they all had unlimited data access?

In all likelihood, the infrastructure on 3G, and quite possibly over Wi-Fi (if you're in a room with a lot of other Wi-Fi users) will not likely be able to handle the better features of the iPhone 4. It's bad enough when I travel to Las Vegas for the Consumer Electronics Show and can't make a phone call – what's going to happen when I also can't access e-mail or other data services because of the poor network? What's the use of having a phone if you can't use it when everyone else is also using their phones?

Here's a rundown of some of the new bandwidth-heavy features on the iPhone 4: First, the new video camera will be able to shoot 720p video at 30 frames per second. I checked some of our videos – a 2-minute, 720p video is about 47MB. On our very fast in-house network (12.5Mbps), this would take about 31 seconds to upload. Back in the real world, where you're lucky if you get 1 Mbps of upload speed, this file would take 376 seconds (6.2 minutes). The iMovie app will let you send video over the network and upload to YouTube, send video in e-mails and MMS, but for most cases, users will likely synchronize the video with their PCs and upload it when they are on a better network. And also, they'd be saving their bandwidth cap.

The FaceTime video chat app will only work over Wi-Fi in 2010, which is a blatant admission that the app isn't good enough for a 3G network. In addition, the app will only work with other iPhone 4 owners, so this will limit your ability to video chat with anyone that matters. I can't even get people to sign up for Skype in order to video chat with me. In order for FaceTime to work, both parties will have to own iPhone 4 devices, and both parties will have to be on a Wi-Fi network (hopefully one that's not overly busy). I don't even video chat with my family when I'm on the road because the Wi-Fi in the hotel room is so bad.

As we've seen from the iPad, the Netflix app does a good job of caching/buffering or otherwise optimizing video streams to the device, and the iPhone's smaller screen should help on that front. But this will only benefit users who are grandfathered in on the AT&T unlimited plan. Do you really think that people who are facing bandwidth caps will use up part of their bandwidth allowance so they can watch old episodes of "The Dick Van Dyke Show"?

All of these new features come on top of our already voracious appetite for data-intensive apps on mobile devices. Patrick Lopez, chief marketing officer at Vantrix, shared some statistics and trends with me about current data usage over mobile networks:

* YouTube accounts for 30 to 50% of actual traffic;
* Netflix is now providing full-length features for streaming;
* Video is responsible for 50% of mobile traffic, and the networks weren't built to handle this strain.
* 2GB of data will be reached by most users very quickly – most likely into 2 to 3 weeks of their monthly subscription after regular use (two to 3 videos per week).

I can't blame AT&T for capping the bandwidth on data plans ahead of the iPhone 4 announcement, considering their current network issues and the likelihood of more apps coming to the network. With more carriers likely to cap their bandwidth too, it becomes clear that the infrastructure simply can't handle the traffic we're putting on it.

So what's the solution? It's easy for me to rant and yell at the carriers to just build faster and bigger networks, but we all know that it costs money and time to do this. That's what they're all doing anyway with WiMax and LTE. I can't say that Verizon would have any more luck with an iPhone on their EV-DO network than AT&T has had.

Do we blame the creators of these devices for creating faster processors and cameras that let us create 720p videos? Do we blame Netflix for coming up with ways to stream videos across a mobile network? Or is the real reason I'm annoyed is that I've been able to experience the "all-you-can-eat" buffet of unlimited data, and now that I have to pay for my appetite, I'm going to be "eating" less (or paying more).

Maybe Apple should just buy or create their own mobile network, so it can provide quality services for its applications. Now that's something we could get excited about.