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iPhone 'Surfing' On AT&T Network Isn't Fast, Jobs Concedes

Apple and AT&T CEOs Say Wi-Fi Gives Boost; Seeing Parallels to Mac

By Nick Wingfield and Amol Sharma

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In an interview ahead of the iPhone launch, Apple Inc. CEO Steve Jobs and AT&T Inc. CEO and Chairman Randall Stephenson addressed concerns that the device will have slow Internet access on AT&T's cellular network.

Mr. Jobs acknowledged that the company's new iPhone won't surf the Internet as fast as he would like on the network, called "Edge," but added that the device's ability to connect to Wi-Fi hotspots would give consumers a speedier alternative for Web browsing. For his part, Mr. Stephenson said the iPhone represents a broader push by AT&T into Wi-Fi services, including, potentially,

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mobile Internet calling. The two men also discussed the iPod's "halo effect" and reflected on the origins of their corporate partnership.

The iPhone's first real chance to prove itself will begin Friday at 6 p.m., when the public is finally able to get its hands on the product. If it's successful, the product -- a cellphone combined with entertainment and Internet functions, all of them controlled by finger taps on a touch-sensitive screen -- could force changes across the wireless industry, forcing cellphone makers to respond with new twists in their own hardware. Already, eager fans are lining up at AT&T and Apple stores around the country to buy the device

Excerpts from the interview follow:

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WSJ: Steve, on the eve of the iPhone launch, we wonder if you might compare it to others you've been involved in -- the introduction of the Macintosh, for instance -- both in terms of the consumer anticipation and your own feelings about the impact the product will have in the market?



Steve Jobs

Steve Jobs: One of the things we feel is this is the biggest breakthrough in user interfaces in 23 years. Since the Mac in 1984 brought us the mouse and bit map displays and folders and icons, there really hasn't been much except for the evolution of that in the last 23 years. This is a revolutionary user interface [on the iPhone] -- multi-touch, direct action. It's pretty remarkable. I'm very excited.

I remember the week before we introduced the Mac. We knew every computer would work this way once we had the Mac. You couldn't talk about 'If,' you could debate about 'When.' That's how I feel about this. I feel this is the direction mobile devices are going to have to go. I don't think it's a matter of if, it's a

matter of when. The first and most breakthrough one of them is going to be on the market tomorrow.

WSJ: One of the interesting things for people about the iPhone is the bundling of data and voice into one service plan. We've talked to some other smartphone manufacturers in the last couple days who say that would be great if that were extended to other devices because it seems like it would ensure that out-of-the-box people aren't getting an experience where they're pressing a button and something doesn't work. Is that something that you are looking at extending to other phones in the AT&T lineup over time?

Randall Stephenson: It depends on the handset itself. With this particular device, to not have an inclusive data package with a voice package would be almost irrelevant, right? This is a data and a voice product. It's nonsensical to sell a rate plan separate. As you see devices migrate towards this type of device, I fully expect you'll see rate plans migrate towards that as well.

WSJ: What do you both envision being added over time to the iPhone, in terms of access to ringtones through Cingular's (now rebranded AT&T) platform and maybe through some other manner, like turning your iTunes songs into ringtones?

Mr. Jobs: As you may know, iTunes is now the number three distributor of music in the U.S., ahead of Amazon and Target and behind Best Buy and Wal-Mart, and obviously the largest online distributor of music in the world. Of course, you can play that music now on your iPhone. One might imagine a lot of things down the road.

WSJ: Is one of those things offering music purchases and video purchases directly from the phone?

Mr. Jobs: There's a lot of things you can imagine down the road.

WSJ: Steve, how are you feeling now about how this device will impact your iPod business? Will it cannibalize iPod sales in any meaningful way?

Mr. Jobs: We can report to you that it hasn't so far. We announced this in January, and we've had a very healthy iPod business since then. This is a more expensive device and one that carries a service requirement with it, unlike any

iPod does. I'm not too worried about that, but we'll certainly report to you what happens as it happens.

WSJ: A lot of attention has been focused in some of the initial reviews of the iPhone on the EDGE network that this phone is going to be on. Steve, we saw somewhere that your concern in putting a 3G chip in the first edition of the iPhone was that the current generation of that technology would drain the battery a lot, and that there were also some issues of coverage of the AT&T 3G network at the time you did this deal. Is that correct and have those issues been resolved over time as we've seen the technology evolve?



Randall Stephenson

Mr. Stephenson: If you think about wireless broadband networks, EDGE is the only ubiquitous nationwide broadband network deployed today. It's a 300-plus kilobit type service. We're selling in the tens of thousands every single month of smart phones that operate on nothing but EDGE. The service experience is really, really good and what you're going to see with the iPhone is the caching technology that Steve and the Apple guys have developed here makes the EDGE experience even better. Between the Wi-Fi and the EDGE coverage, this is a really good experience.

We put right south of \$16 billion of capital into this network over the last two years. I feel real good about the coverage and the performance. We put tens of thousands of hours of testing this device on this network and it's performing at the top of any device we have out there.

Mr. Jobs: You know every (AT&T) Blackberry gets its mail over EDGE. It turns out EDGE is great for mail, and it works well for maps and a whole bunch of other stuff. Where you wish you had faster speed is…on a Web browser. It's good enough, but you wish it was a little faster. That's where sandwiching EDGE with Wi-Fi really makes sense because Wi-Fi is much faster than any 3G network.

What we've done with the iPhone is we've made it so that it will automatically switch to a known Wi-Fi network whenever it finds it. So you don't have to go hunting around, resetting the phone, flipping a switch or doing anything. Most of us have Wi-Fi networks around us most of the time at home and at work. There's often times a Wi-Fi network that you can join whether you're sitting in a coffee shop or even walking along the street piggybacking on somebody's home Wi-Fi network. What we found is the combination is working really well.

When we looked at 3G, the chipsets are not quite mature, in the sense that they're not low-enough power for what we were looking for. They were not integrated enough, so they took up too much physical space. We cared a lot about battery life and we cared a lot about physical size. Down the road, I'm sure some of those tradeoffs will become more favorable towards 3G but as of now we think we made a pretty good doggone decision.

WSJ: Can you say whether 3G technology has evolved to the point where you're already working on including that in the next edition of the iPhone?

Mr. Jobs: No, we just don't comment on future stuff.

WSJ: Can you discuss any applications you'd like to see third-party developers create for the iPhone, specifically things like Skype and other voice over Internet protocol software?

Mr. Jobs: We obviously thought about VoIP. You still need a cellular phone because you're not always going to be in a Wi-Fi hotspot. One you have a cellular phone plan, it costs you zero incremental dollars to use it when you're making the next phone call. VoIP, while an interesting technology, didn't seem to be a big breakthrough to us. But others might feel differently, and others may make Web-based VoIP clients available for the iPhone – I think someone's already working on that.

But I think the majority of applications people are going to write for the iPhone are going to be things that corporations like. [Salesforce.com CEO] Mark Benioff has announced he's going to be doing some exciting stuff with the iPhone… I think people are going to surprise us over the next six or nine months with some pretty creative stuff.

WSJ: T-Mobile launched a service this week that allows cellphone calls to roam onto Wi-Fi networks when a user is in a hotspot. The technology is geared at helping people get better coverage indoors and save on their monthly cellular minutes. Is that technology impressive and something either of you have looked at?

Mr. Stephenson: At AT&T we fully expect that. We're working on the technology ourselves. The iPhone is really our first entrée into a dual-mode handset utilizing Wi-Fi and traditional wireless technologies. That's the interesting part about the iPhone. It's causing everybody to stop and reflect on what's possible.

WSJ: There was a halo effect on the Mac as a result of the iPod. Are you envisioning anything similar with iPhone? Will it have synergistic effects on other parts of your business?

Mr. Jobs: The iPod halo effect has been real. A lot of people who've never owned an Apple product are buying their first one in an iPod. They're having a great experience with it and they're saying, Wow, what else does Apple make? They're

more receptive to looking at the other products we might make. I would certainly hope that happens with the iPhone. I hope the iPhone will be the first Apple product that some, maybe many, people buy.

WSJ: What about the fact that the iPhone and other Apple products share the same underlying technology or operating system. Could people who write applications for the iPhone now be more attracted to becoming Mac developers?

Mr. Jobs: We have lots of people writing applications for our computers. We have almost one million people in our developer program. I don't think that's what matters to customers. What matters to customers is the experience they have using the product.

WSJ: Have you learned anything about partnering through the AT&T experience? How has it changed Apple?

Mr. Jobs: We first chatted with AT&T two-and-a-half years ago. We're from different industries, different parts of the country. And yet it's been a great relationship so far.

We started off thinking we should do an MVNO (mobile virtual network operator) and in talking that through with AT&T, both of us came to the realization that would just be a big waste of energy. We'd be trying to duplicate a lot of things they were already doing at a much greater scale. And we came to this...simple partnership: Let AT&T be AT&T. They've forgotten more about running a network than we'll ever know. And let Apple be Apple. We think we know how to design a great phone.

WSJ: Is Apple pursuing other global partnerships for the international iPhone launch?

Mr. Jobs: When we have something to talk about we'll give you a holler, but nothing today.

WSJ: To clarify on your comments about Wi-Fi handsets: Were you saying, Randall, that this phone will eventually evolve into that kind of device that does seamless roaming on Wi-Fi and cellular, or are you just saying there will be many more Wi-Fi devices?

Mr. Stephenson: This phone is the first device that truly kind of breaches that gap. You have a device they gets you true six-megabit broadband speeds on Wi-Fi connectivity. You get the mobility aspects of traditional cellular-type technologies. It begins to let your mind wonder. Once you have those kinds of speeds of a wireless handset … it just opens up a whole new world to what can be done on these wireless devices.

Mr. Jobs: A few years ago, the perception was that the large operators viewed Wi-Fi as potentially an enemy. And I think quite the opposite is now the case. Wi-Fi is viewed as a friend.

Mr. Stephenson: Absolutely -- in fact Wi-Fi is just an enhancement to your existing wireless capability. I have this perspective that the more wireless we become, the more wireline we become. The deeper you push these wireless capabilities the more you're relying on the underlying wired transport which is a much faster, high-capacity transport. And Wi-Fi just takes that to the nth degree. You could not have thought of VoIP on a wireless handset until you start thinking about Wi-Fi capabilities on these handsets. That doesn't intimidate us at all. I think it's a very nice enhancement to an existing service.

WSJ: Did you make enough of these to meet demand?

Mr. Jobs: We're building a fair number of them, but we may not. We had to make our best guess as to what the demand was going to be and what supply we were going to put in place many, many months ago. We built factories to build these things and everything. We've taken our best guess but it wouldn't surprise me at all if it ain't enough.

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