



Transcript of podcast with:

John Horrigan, Associate Director for Research at [Pew Internet and American Life Project](#)

Chauncy Rucker (CR): Welcome, I'm Chauncy Rucker. I'm at the 2008 Technology Innovators Conference. It's being hosted by the National Center for Technology Innovation. The theme this year is "Thriving in a Global Marketplace." I'm having a conversation today with John Horrigan. John is the Associate Director for Research at Pew Internet and American Life Project. So John if you could just give me some of your thoughts about mobile computing.

John Horrigan (JH): I'm happy to do so. At the [Pew Internet American Life Project](#), for the past eight or nine years we have been tracking how people use the Internet, what they use it for, what the social consequences of online use are. When we started in business, dial-up Internet was the way that people accessed the Internet. It seems a long time ago...Most people who remember dial-up aren't harkening back to the good old days of dial-up. I don't think we're going to have dial-up hobbyist clubs anytime soon to remember the good old days of hearing the trill of the modem and the whirr of the phone line connecting.

Around about 2004 we saw broadband adoption at home exceed dial-up Internet access at home and we've entered this world where people have "always on" access to the Internet through the home broadband connection. Today we find that 57% of Americans have high-speed Internet connections at home. 75% of Americans have Internet access of any sort, so when you do a little math, you can see that the vast majority of people with Internet access at home have broadband these days. Dial-up is fading.

What we're starting to track, what we've been tracking for the past couple years now, is how people are using mobile devices to access the Internet. There are a couple of interesting points about that, especially when you start to think who is included in participation in the digital society and who isn't.

I mentioned that 75% of adult Americans have Internet access, most of that is access from home. When you look at cell phone penetration, 77% of Americans have a cell phone but the distribution of access is a little different than for Internet access. People, older Americans are more likely to have a cell phone than they are to have Internet access and certainly much more likely to have a cell phone than broadband at home, so mobile computing or mobile Internet through the cell phone certainly opens up doors to access that might not otherwise be there.



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So what do we see when we start to look at what people do with their cell phone? Obviously cell phones have become very multifaceted tools in just the past couple of years and they're becoming more multifaceted all the time. There's more computing power on a cell phone and I wish I had the statistic in my head, but the amount of computing power in your hand with a cell phone or with a Blackberry these days is probably greater than the amount of computing power you had on your desktop in 2000 or 2001. So these devices are becoming extremely capable of doing a range of different things. That's the device end.

On the network aspect, the wireless networks that are used to actually access information, whether it's digital information online or just talking to somebody as cell phones were originally intended for, those networks are becoming better and faster. The 3G networks that we hear about so often are being rolled out more aggressively. In some instances, those 3G networks actually meet the standards for broadband.

That's sort of a tricky question because the FCC recently, with good reason, changed the definition of what counts as broadband. Until recently if you had 200 kilobits per second access in either direction, that connection counted as broadband. If you actually went online with your computer and you're used to broadband on your cable modem or something like that an experienced 200 kilobits per second, you might think that's a little bit slow. So they redefined what counts as high speed to include to 768 kilobits per second which is usually what you can at least get on a DSL line.

Back to the wireless networks though, some of these 3G networks can get in excess of 200 kilobits per second so they don't do too bad and with a nice spanking new device and if you're lucky enough to be near where a robust 3G network is, you can do a lot of things with a cell phone.

We did a study that was released in March of this year [Editors note: see http://www.pewinternet.org/PPF/r/244/report_display.asp] that asked people if they had a handheld device, what they do with it beyond just talking on the phone. We were really struck by the breadth of things that people do online and the frequency with which they do things. People on a typical day, 42% of people who have a handheld device are doing at least one of ten things on their cell phone that is what we call a non-voice data application. That means-above and beyond just talking on the phone-they're texting, they're emailing, they're accessing the Internet for information for maps and the like. They're taking video, and they're taking photographs.

For taking video or clicking a photograph, it's still hard to forward that on and share that from the handheld device to others, less so for digital pictures which don't take up too much bandwidth, but increasingly those kinds of applications will enable not just recording the video or taking the picture for your own posterity or what not, but for



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sharing with others. So again, 42% of people are doing at least one of these non-voice data applications online.

Now at the start, I talked a little bit about older folks and their access and use of these devices. I want to focus a second on younger people and how they use their handheld devices and the adoption patterns.

One thing we found was that African-Americans and Hispanics are leading the way in using these non-voice data applications. Now on the one hand that's not too shocking because Hispanics, for instance, and, to a lesser extent, African-Americans, but both of those demographic groups tend to be younger than white Americans, so you figure young people will really use these things more than older people.

At the same time when you do the analysis and control for age, we still find that African-Americans and Hispanics are using these applications more actively. The adoption patterns are interesting because it's a very diverse group of relatively early adopters. The reason to us that that's very interesting is that that reverses the traditional Internet adoption patterns. I don't if listeners might remember the point-cast application from the 1990's. That was a push news service that over your dial-up Internet connection would push news headlines to your desktop. Now that was developed in part because it was responding to the audience online at that time which were mostly male, which were mostly white, mostly interested or very much interested in news, so you had an audience with certain characteristics that made it attractive to develop an application like point-cast to serve that audience.

Now with mobile Internet, we have a much different and much more diverse audience than was the case with the adoption of dial-up Internet and with the adoption of broadband Internet. This, it would seem to me, suggests that innovators and developers of applications are going to have a much more diverse audience to serve. That's one element of the innovative consequences.

The other element is that innovation these days often happens with rich interaction between the developers and the users. There's a book called *Democratizing Innovation* that talks at length about how users are key to the innovation process in a way that wasn't the case many years ago. Now you have the opportunity to bring this diverse group of mobile Internet users into the equation for innovation, and if you think that diversity helps promote creativity, you're looking at potentially a very rich innovative environment for mobile applications. That's a very distinctive and interesting aspect of the adoption patterns for mobile Internet.

A final thing I can talk about is the question that you hear so often in the context of where the United States stands in the broadband rankings internationally. So is mobile broadband the future? My answer at least at the moment is that maybe that's the case, but when you look at mobile wireless access to the Internet at this point is mainly a



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compliment rather than a substitute for broadband at home and just to go into that a little more, our data shows that something like 90% of people who are using a handheld device to access the Internet also have broadband at home, so we don't see the case of people saying, "Well I can't get broadband where I live." Or, "I don't like the price, it's too expensive, therefore I'm going to rely solely on the mobile device for Internet access." We simply don't see that very often yet in the data.

People who are already converted to broadband who are likely to be rather ardent tech users to begin with are using the mobile device as an access tool to fill out or complement their online use rather than substitute for it.

Actually you do see the substitution effect in some nations, but that has to do with the nature of their marketplace. In some nations your broadband access at home through cable modem or DSL that kind of access has a monthly usage cap, so if you go over the cap you start to get charged for it. In those countries, some of these mobile applications or these mobile plans don't have data caps so it's sort of a rational choice to perhaps do away with your broadband connection at home since the deal isn't very good and substitute wireless. Again that's not the case in the United States.

The other issue also goes back to the question of network speeds which I discussed earlier. It's still not the case with very few exceptions that a wireless broadband connection is going to be a faster and more robust than a wired connection. In Baltimore, MD where I live, Sprint/Nextel recently came out with WiMax, which is known as "wi-fi on steroids", which is a wireless access technology that is much more robust. It propagates over much greater distances than wi-fi and gets, you know, maybe five to six gigabytes access. Apparently that technology is working fairly well in Baltimore, but it's in the trial stage so it's not widely available yet. I think because of speed of wireless networks at this point, mobile being the next thing right around the corner is not quite the case. It'll take a little time to get there.

CR: Well thank you very much. It was interesting to me for sure and it will be to everyone who listens.

JH: Thank you Chauncy.

CR: Thank you John.