Seeding The Cloud: What Mobile Access Means for Usage Patterns and Online Content

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It only takes a trip to a coffee shop or a stroll down the street to see how prevalent wireless devices are these days. Our recent research shows that 62% of American adults have either accessed the internet wirelessly or used non-voice data applications, such as texting, emailing, taking a picture, or recording video, with a handheld. On the average day, 42% of those with cell phones or other wireless-enabled handhelds use the devices for at least one non-voice data application.

With the Federal Communications Commission auctioning spectrum well-suited for high-speed wireless applications, and with some companies beginning to open up handheld devices to application developers, more innovations in wireless access are on the horizon. In particular, "cloud computing" will emerge in the coming years—moving applications and data storage away from the desktop or laptop to remote servers managed by high-speed networks. Computing applications and users' data archives will increasingly be accessible by different devices anytime, anywhere over fast and widely available wireless and wired networks.[1]

It is hard to overstate the importance of online access becoming decoupled from desktop computing. In 1998, when one third of adults had online access, a desktop computer and monitor cost about $1,800. This meant that upper income Americans and, as it happened, mostly men, used computers and the internet. The result was online content that served the demographic profile of early users – lots of news from services such as Prodigy and so-called e-zines such as Feed which focused on news, culture, and technology. Even the cutting-edge at the time was oriented to news. Remember PointCast, the hot application of 1996 that used push technology? PointCast delivered news headlines to users' desktops, but proved to be a difficult application to run on dial-up internet connections.

In the dial-up era, the cost of the access device tilted the demographic profile of early adopters toward the upscale, which in turn influenced the content developed for the internet.

A diverse base of "on the go" users

Mobile access builds on the cell phone, a device that is easier to use and more affordable than a computer. Adoption patterns have therefore been very different for the device, which is a key platform for "on the go" information access. Cell phone users are more likely to be found in groups that have generally lagged in internet adoption, such as senior citizens, blacks, and Latinos. In our December 2007 survey, 50% of Americans age 65 and over had cell phones compared with 36% who used the internet. Some 84% of English-speaking Hispanics reported having cell phones and 71% of blacks had cell phones, compared with 78% and 63%, respectively, for online access.[2]

More striking than access patterns is usage. For use of non-voice data applications on handhelds, Hispanics and African Americans lead the way relative to white Americans. Half of African Americans and 56% of English-speaking Latinos with cell phones, on a typical day, do at least one of 10 non-voice data applications such as taking pictures, accessing the internet for news, playing music, or texting. By

contrast, 38% of whites do these kinds of activities on a wireless handheld device on the average day. Even lower-income Americans with cell phones (61%) are active in using non-voice data applications on cell phones; 44% of cell users in households with incomes below $30,000 annually do one such non-voice data activity on a typical day.

Seeding the cloud

Google's Eric Schmidt has written that the move to cloud computing not only puts pressure on companies to develop open standards for wireless devices, it also shifts power to users as they create and share digital content.[3] The rules of the game in the wireless world – how open wireless networks and devices are to user-generated content – are currently a subject of lively debate.[4] These rules will help determine whether Schmidt's forecast of a shift in power to users proves correct.

As this debate occurs, it is important to recognize that the users in this emerging environment look different than those of the late 1990s desktop era. Groups that have in the past trailed in "traditional" internet access are in a better position to shape cyberspace as the internet becomes more accessible using wireless devices.

What might this influence look like? In our Typology of Information and Communication Technology Users, we identified the Mobile Centrics, a group that is more oriented to the cell phone than to desktop internet access.[5] It is also diverse in its racial and ethnic make-up. When it comes to digital content, Mobile Centrics are not much into blogging or using the internet as a destination to pass the time, but they are active players of video games. Gaming may be a place where digital cultural diversity finds a media foothold. However this dynamic plays out, the make-up of the population of wireless users offers a distinctive opportunity for encouraging a vibrant cyberspace for the future.

Read the full Mobile Access Report.

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[1] John Markoff, "Why Can't We Compute in the Cloud?" August 24, 2007. Available online at: http://bits.blogs.nytimes.com/2007/08/24/why-cant-we-compute-in-the-cloud/

[2] The Pew Internet-Pew Hispanic 2006 report *Latinos Online*, with a survey that included a Spanish-language option, showed clear gaps in online access for Hispanics. In that survey, 56% of Hispanics had online access and 29% had broadband at home. Available online at: http://www.pewinternet.org/PPF/r/204/report_display.asp.

[3] Eric Schmidt, "Don't bet against the internet," *The Economist*. Available online at: http://www.economist.com/theworldin/business/displayStory.cfm?story_id=8133511

[4] Tim Wu, "Wireless Carterfone," *International Journal of Communication, Vol. 1,* p. 389, 2007. Available online at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=962027.

[5] John B. Horrigan, *A Typology of Information and Communication Technology User*. Pew Internet & American Life Project, May 2007. Available online at: http://www.pewinternet.org/PPF/r/213/report_display.asp.