White Paper

Understanding the Changing Mobile User: Gain Insights from Cisco's Mobile Consumer Research

Authors
Stuart Taylor
Tine Christensen

The mobile market continues to evolve at a blindingly fast pace. It seems that new faster, sleeker, and more powerful mobile devices are launched every day, with new device categories created almost overnight. The number of available applications to run on these revolutionary new devices is staggering, numbering in the millions. Now you can do everything, from banking and controlling your home thermostat to shopping, entertainment, and printing a boarding pass, all from the palm of your hand. In addition, we now have faster ways to connect these devices to the Internet using 4G/LTE or Wi-Fi technologies.

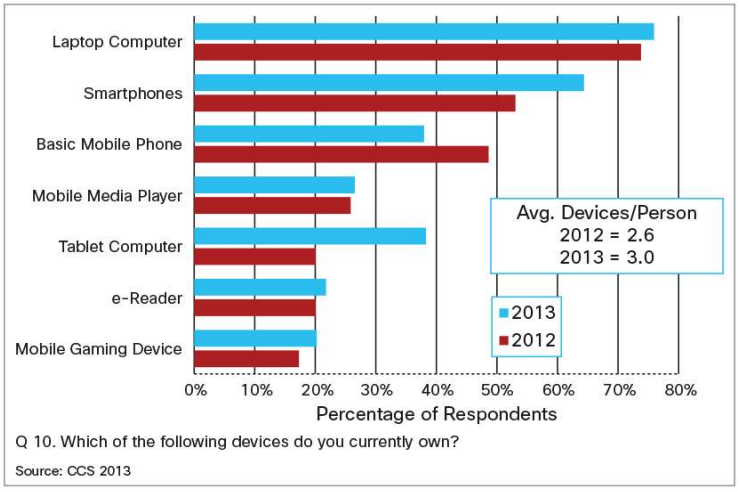
While service providers are clearly benefiting from the rise of mobility and all the innovations in devices applications they are constantly trying to understand how consumers are using mobility and where the mobile market is heading. To continue to derive business value from mobility, service providers need to better understand mobility from the users' perspective and translate what they discover into new sources of business value.

To learn more, Cisco conducted a survey of 620 U.S. mobile users to understand their needs and behaviors, use of devices, applications and mobile access technologies, and how they have changed since our previous mobile consumer study in 2012. The research findings are important, because they can help service providers better understand the rapid changes and emerging trends in the mobile market, identify new business opportunities, and develop robust strategies for winning in mobility. This white paper is part of a series presenting the findings of 2013 Cisco mobile consumer research. Additional white papers focus on what mobile consumers want from public Wi-Fi, as well as opportunities in new localized mobile services.

The World of New Wi-Fi Devices Continues to Grow

Americans have an insatiable love of mobile devices, as evidenced by the significant percentages of respondents who reported using everything from laptops and smartphones to tablets, eReaders, and mobile gaming devices. Americans now own an average of three mobile devices each, up from 2.6 devices in the 2012 Cisco mobile consumer study. Over 75 percent of respondents said that they have a laptop computer (Figure 1). Perhaps more significant, our findings show that the number of smartphone users has grown by 21 percent in just one year to reach 68 percent of the population, at the expense of basic phones. Most remarkable is that the number of tablet owners has expanded by over 90 percent in just one year, with close to four out of ten consumers possessing one of these new devices. The eReader category seems to be leveling off, with just less than one-quarter of consumers owning this type of device. The remaining categories are also relatively flat with single-digit growth for mobile media players, such as Apple iPod, Microsoft Zune, and mobile gaming devices.

Figure 1. Mobile Devices Owned by Consumers (All That Apply)



All these mobile devices now have Wi-Fi Internet-access capabilities. In fact, Wi-Fi is now the predominant access technology for mobile devices, with the exception of smartphones, with over 80 percent of devices having Wi-Fi capabilities. Just less than one-quarter of tablets have any mobile-connectivity capability. All the remaining mobile devices are primarily Wi-Fi devices, with less than 10 percent in each category able to connect through a mobile network. Smartphones are the only truly mobile network device, although nine-tenths of respondents' smartphones are Wi-Fi-enabled, an increase from 76 percent in 2012.

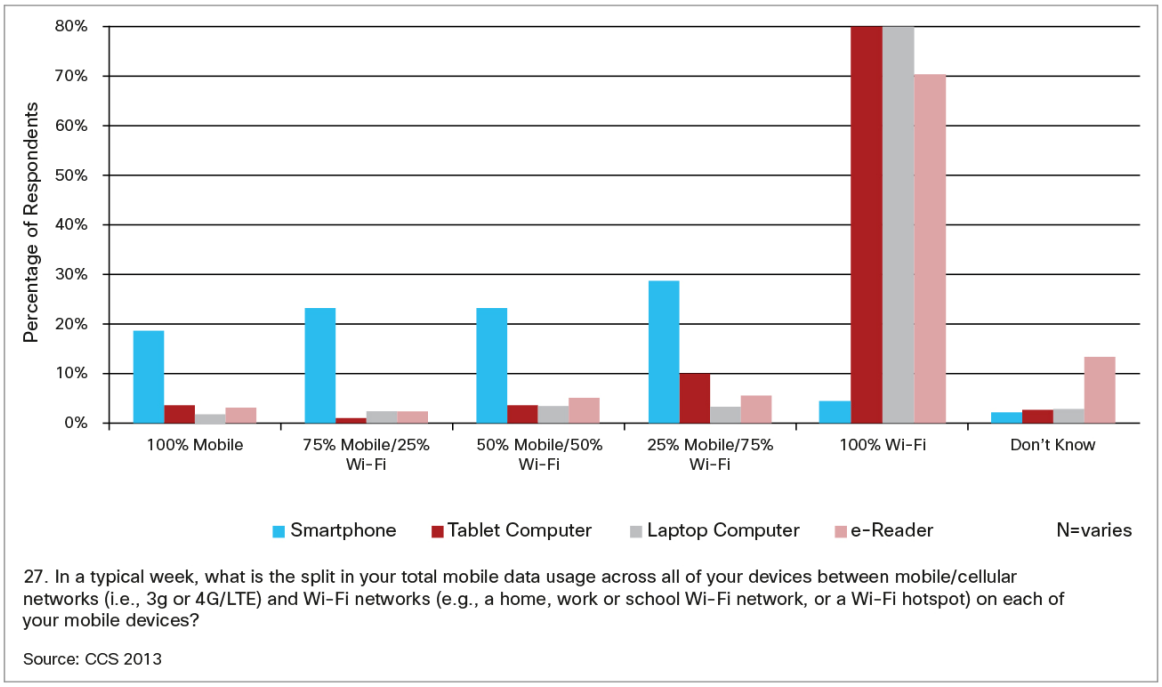
American mobile devices are very personal. Of the total time that consumers are using their devices, 44 percent is devoted to personal Internet use, followed by 41 percent for personal voice calls. The remaining 15 percent of time is evenly split between work-related Internet and voice calls. These findings help explain why 90 percent of full-time workers pay for their mobile service themselves. Employers of the remaining 10 percent are equally split between paying for the entire mobile service or just paying the portion used for business.

Wi-Fi or Mobile? That Is Still the Question

Consumers increasingly rely on and prefer Wi-Fi for connecting their mobile devices to the Internet. As Figure 2 shows, most mobile users connect their devices using Wi-Fi at some point during a typical week, including 80 percent of smartphone owners. This is a significant increase in smartphone Wi-Fi connections, from 70 percent in 2012. Close to 80 percent of tablets, laptops, and eReaders are connecting exclusively through Wi-Fi.

Although 20 percent of smartphone owners connect only through the mobile network, the remaining 80 percent are supplementing mobile connectivity with Wi-Fi. In fact, the average smartphone user uses Wi-Fi 44 percent of the time to connect a device to the Internet. This is a remarkable increase from just one year ago, when one-third of the total smartphone data usage was through a Wi-Fi connection, rather than a mobile network.

Figure 2. Distribution of Network Connectivity Time by Device



27. In a typical week, what is the split in your total mobile data usage across all of your devices between mobile/cellular networks (i.e., 3g or 4G/LTE) and Wi-Fi networks (e.g., a home, work or school Wi-Fi network, or a Wi-Fi hotspot) on each of your mobile devices?

Source: CCS 2013

Voice calls are obviously still made over a cellular mobile connection; however, that is not the case for other communication applications. Thirty-seven percent of mobile users are using Wi-Fi exclusively to connect their devices for emails, and 79 percent are using Wi-Fi at least 50 percent of the time. Consumers making VoIP or video calls use Wi-Fi exclusively just over half the time, and over 80 percent of respondents use it at least 50 percent of the time. The bias for Wi-Fi connectivity is even more pronounced for noncommunication mobile applications. Consumers connect their mobile devices one-third of the time exclusively to Wi-Fi to browse the web or use social media, and just over 80 percent of them use it at least 50 percent of the time. Fifty-seven percent of users download or stream music or video exclusively over Wi-Fi, and 86 percent of them connect over Wi-Fi at least 50 percent of the time.

Home Is Where the Device Is

Mobile usage has definitely shifted to the home in a big way, as can be seen in Figure 3. Almost all consumers use their mobile devices at home, averaging more than 3.8 hours of usage in atypical day, almost double the time they spend using them at work (Figure 4). Just under half of our respondents reported using their devices at work or school, where they typically spend an average of 2.8 hours per day connected to Wi-Fi. These daily usages have grown significantly since our 2012 survey, with 52 percent and 65 percent increases in the number of hours spent using Wi-Fi-connected mobile devices in the home and at work or school, respectively.

The “nomadic” use of mobile devices continues to evolve, as many people now use their mobile devices in “mobile stationary” locations. Thirty-five percent of mobile users connect their devices over hotel Wi-Fi for approximately 1.5 hours per day. Roughly four-tenths of consumers spend just under an hour per day using their Wi-Fi-connected mobile devices in a friend’s home, restaurants and coffee shops, and other locations, such as libraries or doctor offices. In addition, 20 to 30 percent of users are connecting to Wi-Fi for 30 minutes or more daily in travel hubs, retail, event venues, and public outdoor locations.

Figure 3. Mobile Device Usage by Location

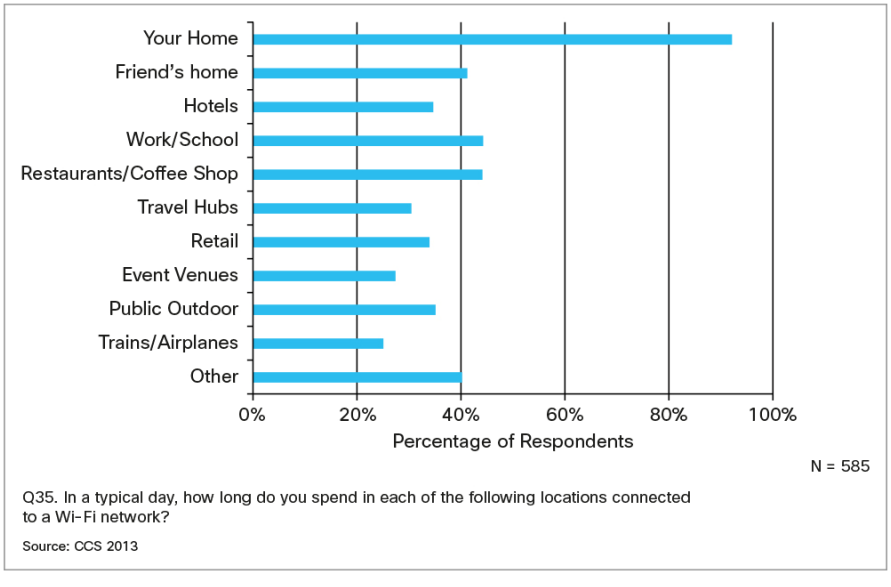
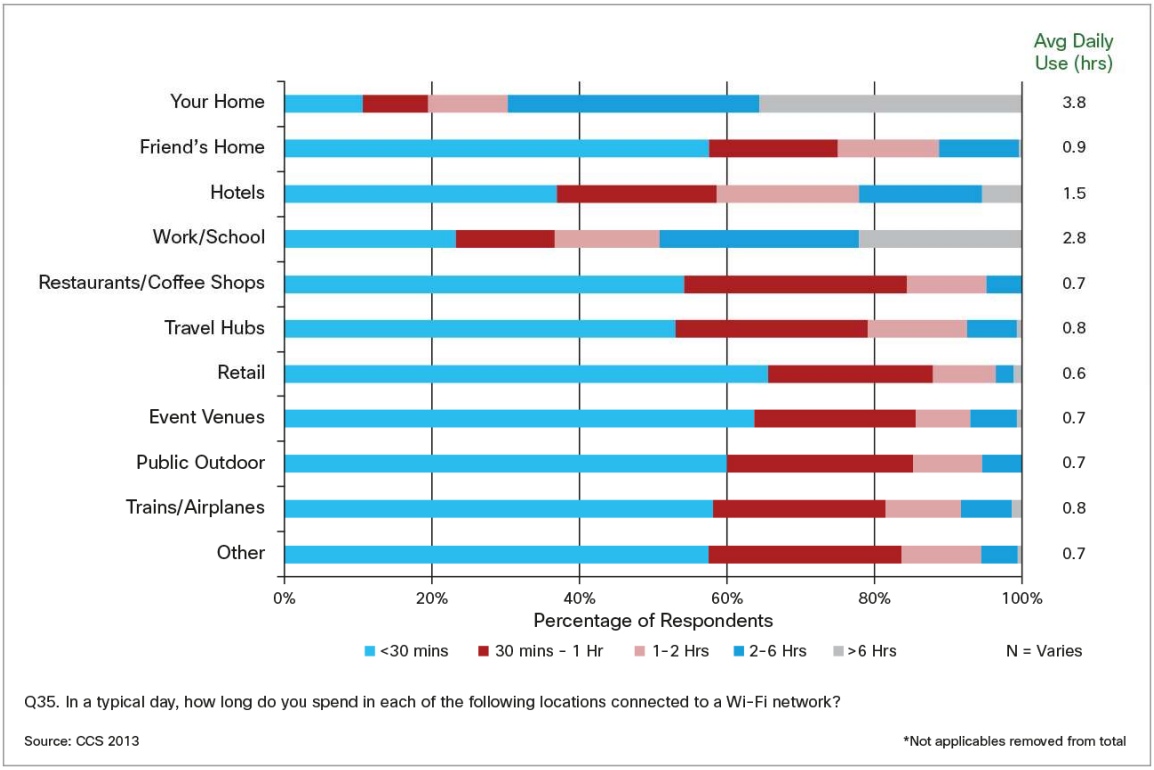
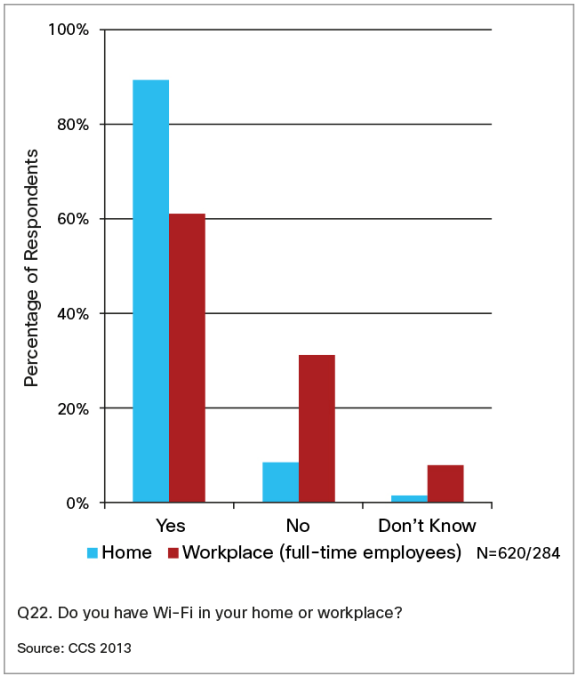


Figure 4. Daily Use of Wi-Fi in Different Locations*



Homes and the workplace are now virtually blanketed with Wi-Fi. As shown in Figure 5, nine out of ten American homes now have access to Wi-Fi. Sixty percent of full-time employees report having Wi-Fi in their workplace, and for knowledge-worker professions, the Wi-Fi workplace coverage expands to 70 percent of full-time employees.

Figure 5. Wi-Fi Availability



LTE and Wi-Fi: Friends or Foes?

The mobile industry is currently divided about the relationship between LTE and Wi-Fi. Some see Wi-Fi as a transition technology on the way to LTE, and once users have LTE, they will no longer need Wi-Fi to achieve higher mobile data speeds. Other industry pundits question why we need LTE, if Wi-Fi can provide high data throughputs and much of the mobility of LTE. Our research shows that the relationship between LTE and Wi-Fi is much more complex than this binary view. The two technologies actually appear to be complementary and synergistic. As Figure 6 shows, a significant number of LTE smartphone users have actually increased both their total data usage and Wi-Fi usage, after they make the transition to LTE. Thirty-six percent of LTE smartphone users reported that their total data usage across all devices increased, to some extent or significantly, after they moved to LTE. Forty-three percent of people reported that they also used more Wi-Fi on their smartphones after upgrading to LTE. And one-third of LTE smartphone users increased their use of public Wi-Fi on their smartphones, despite their being LTE-enabled.

Figure 6. Change in Data Usage with LTE (4G/LTE Smartphone Users)

	Decline	No Change	Some Increase	Significant Increase	Don't Know
All data usage, across all devices	5%	53%	16%	20%	6%
All Wi-Fi usage, across all devices	3%	56%	14%	18%	9%
All Wi-Fi usage, on smartphone only	4%	47%	16%	27%	6%
Public Wi-Fi usage, across all devices	8%	58%	11%	14%	10%
Public Wi-Fi usage, on smartphone only	7%	54%	15%	18%	7%

N = 113

Q48. In each of the following situations, how has your internet and data usage changed since you started using a 4G/LTE-enable smartphone?

Source: CCS 2013

Conclusion: New Mobile Market Equals New Opportunities

New devices, changes in customer behaviors, and technological advances are rapidly changing the mobile market and consumers' expectations of mobility. Cisco's mobile consumer research clearly demonstrates that consumers are using a greater number of mobile devices to do a greater number of things. It also reveals that, despite being mobile, mobility plays a significant role in the home. When consumers are out of the home, office, or school, they have a much more nomadic lifestyle, moving, sitting and stopping, and connecting, then moving on again. This hunger for new mobile devices and applications, along with changes in customer behavior, is driving a greater adoption of Wi-Fi as a core technology for connecting all these devices to the Internet. It is also becoming clear that the rise of Wi-Fi is not a threat to traditional mobile technologies. Rather, it is a complement in the mobile access portfolio, offering up new business opportunities. These monumental changes in the mobile marketplace offer service providers new and unique opportunities to enhance their overall mobile customer proposition and experience and explore new commercialization models.

Service providers need to consider several important implications and potential strategies to position themselves to capture emerging mobility opportunities:

- Incorporate Wi-Fi as an integral part of your portfolio. Use pricing, marketing, and new technological solutions to create compelling and integrated offers and solutions of value to mobile users.
- Create new Wi-Fi services. Target noncellular nomadic devices, such as tablets and eReaders, with Wi-Fi connectivity options.
- Target Wi-Fi use in the home. Create solutions and incentives to encourage users to offload mobile traffic at home, while retaining the ability to provide a unique and differentiated mobile experience.
- Integrate the home Wi-Fi experience. Develop applications for use in the home that integrate the Wi-Fi experience and other service provider services, such as video.

About the Survey

Cisco conducted an online survey of 620 U.S. mobile users in August 2013. The survey base was representative of the U.S. population in terms of age, income level, physical distribution, and employment status. Fifty-eight percent of respondents were employed: full-time (46 percent) and part-time (12 percent). The remaining 42 percent were not employed: stay-at-home (9 percent), student (7 percent), unemployed (9 percent), and retired (18 percent). Fifty-two percent of respondents described the area in which they live as suburban, while other living environments consisted of urban (24 percent), rural (16 percent), and semi-rural (8 percent).

The study was also undertaken in Brazil, Italy, Japan, Russia, and the United Kingdom.

Acknowledgements: The authors would like to acknowledge the contributions of Lauren Buckalew to this paper.

For More Information

http://www.cisco.com/go/spwifi

http://www.cisco.com/web/about/ac79/sp/index.html#tl

Authors
Stuart Taylor, Director
Service Provider Transformation Group
+1 978 936 0022
stuart.r.taylor@cisco.com

Tine Christensen, Director
Cisco Consulting Services - Service Provider Practice
+1 978 936 5713
tichrist@cisco.com

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

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Printed in USA C11-729796-00 11/13