

The Changing Face of Mobile

by Jesse Cryderman, Associate Editor

As the development of wireless technologies continues to advance, the very definition of a mobile device is changing. A few years ago, mobile devices were either handsets or awkward USB devices for laptop-equipped business users on the go. Today the landscape has expanded and the map of mobile keeps getting larger, as each new device promises to fulfill a need that hasn't been met by traditional mobile.

Additionally, service providers are taking an active role in putting new mobile devices in the hands of users. This time, instead of subsidizing the hardware—the model for cell phones—providers are subsidizing the connectivity with limited free data

“The diminutive tablet is big business—tablets are projected to outsell laptops by 2011 and desktops by 2012.”



plans or covering the cost of data traffic (to wit: Amazon's Kindle). So what's new in 2011, and how is the face of mobile changing?

Tablets

Although tablet computers have been around for several years, it wasn't until the launch of the iPad that this hardware platform really caught fire. With a larger screen and more robust hardware specs than a smartphone, a tablet offers a level of computing and user experience that was previously only available on a laptop, but in a more portable form factor. And while tablets are available without cellular capabilities, the platform really shines when enabled with broadband mobile wireless. Since the iPad has opened up the

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market, many offerings running the Android OS are on the way, as well as tablets running Windows 7.

“The all-in-one nature of media tablets will result in the cannibalization of other consumer electronics devices such as e-readers, gaming devices and media players,” said Carolina Milanesi, research vice president at Gartner Research.

Tablets are certainly the fastest growing new mobile device platform. Forrester Research projects tablets will outsell laptops by 2012, and eclipse desktop sales by 2013. Goldman Sachs recently predicts 54 million tablets will be sold in 2011, climbing to nearly 80 million in 2012. Gartner research also envisions explosive growth for tablets, projecting numbers similar to Goldman Sachs.

Hybrid Devices

Imagine driving a car that gives you directions to your daughter’s new apartment, sends a message to her when you are five minutes away, and reminds you to buy a gift for your anniversary. We’ve perhaps pictured such devices, or seen them in sci-fi movies, but they are now becoming a part of the fabric of everyday living.

Cellular connectivity can be installed in just about any device, stretching the traditional definition of the mobile experience. Telematics systems like OnStar,

“Telematics systems will give way to the 4G connected car in the near future.”

Ford Sync, and Lexus Safety Connect combine GPS navigation and “walled garden” cellular connectivity to offer convenience and emergency services. This brand of mobile experience will soon be much more than a call center coupled with infotainment and decent directions, however. Alcatel-Lucent demoed the “LTE Connected Car” at 4GWorld 2010, a vehicle with an integrated LTE/4G broadband radio link that “brings cloud-based multimedia services into the car.” This means streaming video on demand and mobile gaming...to multiple in-vehicle monitors.

Sometimes cellular connectivity is external, like the ubiquitous USB cellular dongles, and turns another device into a mobile platform. Such is the Sprint ZTE PEEL, a case-like cradle device for the iPod Touch that enables access to the Sprint 3G cellular network (essentially turning it into an iPhone).

There are also many devices that are not yet commercialized, or have been released in a Wifi-only version first to test marketability. One device is the brand new Sony Dash, a sub-\$200 “personal internet viewer” with a touchscreen and 1,000 free apps that

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dish up customized real-time information. The Dash is less than a tablet but more than a handset; imagine an internet-connected version of the small televisions designed for kitchen use.

Mobile Broadband

Why keep your internet connection tied to your home when you could take it with you? That's the question answered by wireless broadband devices, offered now by nearly every service provider. These saucer or card-deck-shaped portals are basically the guts of a cell phone and a big rechargeable battery. They broadcast their data pathway via Wifi, so no need for a USB connector, and most also function as Wifi hotspots, allowing multiple devices to dip into the data pool. And if you buy a device from Clear or Sprint, it will likely be much faster than the native data connectivity of any 3G handset.

Most mobile broadband hotspots require a two-year contract with the service provider, but pay-as-you-go success story Cricket has just launched their own, the Crosswave Wireless Hotspot. It's available online for just over \$100, requires no contract, and boasts "faster-than 3G speeds," according to an in-store sales representative. Symmetrical to their release of the \$100 Huawei Ascend (Android 2.1), Cricket seems intent on driving the new mobile experience to the masses for the lowest possible price.

Smarter Phones

As smart phones get smarter and hardware gets faster, the mobile experience likewise evolves. Newer phones are capable of functioning as wireless hotspots, functioning as a data portal for the home office or the coffee shop meeting. Hardware specs on the Windows 7 phones permit XBOX-style gameplay. And improved cameras have turned handsets into portable document scanners, bar code scanners and credit card processors.

While available in other parts of the world for some time, handsets are just starting to ship to the U.S. with NFC (Near Field Communications) chips which will enable mobile/swipe payment as well as unique peer-to-peer services.

Cellular Enabled Netbooks

Straddling a line somewhere between a tablet and a laptop is the inexpensive netbook, a slender computer with few moving parts and tooled to take advantage of web-based and cloud services. The netbooks of the past often had very slow processors and were beleaguered by sub-par operating systems, but today's netbooks have lightning fast solid state drives, optimized operating systems and are shipping with built-in cellular connectivity. While major providers like Verizon and AT&T sell wireless internet-enabled netbooks, the hottest news is the Google Cr-48, a netbook running Google's Chrome OS with a nearly instantaneous boot time and built-in 3g cellular radio.

Bundles of Joy

While the traditional model is still in play—service providers subsidizing purchases with a data contract—service providers and online companies like Amazon are playing the other direction too: subsidizing data services in new ways to expand the mobile experience. Verizon is providing free 3G service for new netbooks by Google (100mb/month for two years, no contract), Amazon pays for Kindle's free 3G wireless service, and the Data Wind Ubisurfer netbook comes bundled with a free year of 3G service for \$250 total.

The Future is Bright

There is no doubt the mobile experience is changing, as evidenced by the push to make new cellular-connected devices a part of everyday life. Some devices we will likely see in the near future include: handheld gaming devices that are highly portable with long battery life and pull all games from the cloud; more devices that deliver free internet content from a "walled garden" portal (like the Kindle, but for movies, tv, or music); and home entertainment devices, like a 3D blu-ray player with built-in 3G/4G. The widespread deployment of 4G/LTE networks will certainly enhance mobile experience as well, making mobile high-definition streaming content a reality, and enabling such services as facial recognition apps and realtime translation.