

## **This Week's Stories**

### **Rumor Mill: Verizon Rolling Out LTE SIM Cards, New Global Hotspot**

July 19, 2010

As Verizon Wireless hurtles toward the launch of its LTE network later this year, the carrier is developing a system for LTE SIM cards to be used in its new high-speed wireless devices, according to documents posted by the blog *Engadget*.

According to the blog, which cites internal Verizon LTE documents, the company is preparing its computer systems for LTE SIM cards. Verizon, which has long operated a CDMA network, does not use SIM cards for its current devices, but likely will be using them for LTE-enabled devices such as modems and then later smartphones and other gadgets.

Much of the information in the documents is already well-known: that Verizon plans to launch up to 30 LTE markets in the fourth quarter of 2010 covering 100 million POPs; that it will provide average downlink speeds of 5-12 Mbps; and that LTE smartphones will be coming next year. The documents also revealed that the carrier expects its LTE network to have latency of 30ms, which it compared with 100ms on current 3G networks and Sprint Nextel mobile WiMAX service.

A Verizon spokesman declined to comment.

In other Verizon LTE news, according to FCC documents the commission approved an LG-made modem that supports EV-DO in the 850 and 1900 MHz bands as well as LTE in the 700 MHz band, where Verizon is deploying its network.

Additionally, according to *Engadget*, Verizon plans to launch a new CDMA/UMTS global mobile hotspot device called a "Fivespot."

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### **AWS-3: The Destination of T-Mobile's LTE Network?**

July 20, 2010

T-Mobile USA recently completed an eight-city spectrum-interference study (click here to check it out) with the goal of convincing the federal government to relinquish a massive chunk of bandwidth that--if all goes to plan--T-Mobile might use to build an LTE network. And though T-Mobile still faces a range of challenges in its bid for the spectrum (and may not even use it for LTE) the situation does give the carrier yet another option in its efforts to maintain equal footing with rivals in the mobile broadband game.

T-Mobile's spectrum-interference study centered on the 1755 - 1780 MHz band. That's the block of spectrum T-Mobile is urging the FCC to pair with the AWS-3 block (2155-2580 MHz) and put up for auction. If the FCC does pair AWS-3 with suitable spectrum, and if it does put those airwaves up for auction, and if T-Mobile wins that auction, officials for the nation's No. 4 carrier acknowledge that T-Mobile could use that bandwidth to launch a nationwide LTE network.

Obviously, that's a lot of "ifs." Nonetheless, the issue represents another factor in T-Mobile's growing arsenal of 4G options. Already, the carrier is rumored to be in talks with both Clearwire and Harbinger Capital Partners (now LightSquared) for potential spectrum tie-ups. However, both those approaches require Deutsche Telekom's U.S. subsidiary to work with another entity to build a next-generation wireless network. The AWS-3 option could give T-Mobile direct control over its next-generation network future.

To be clear, there are a range of factors in play and a variety of possible outcomes. AWS-3 is currently "unpaired," which means it isn't matched to an adjacent spectrum band--U.S. wireless carriers generally prefer paired spectrum bands that allow for Frequency Division Duplex technology (rather than the Time Division Duplex technology used for unpaired spectrum). Startup M2Z, which is headed by heavyweights John Doerr and John Muleta, has for years petitioned the FCC to give the company the unpaired AWS-3 block of spectrum; M2Z wants to use it to build a nationwide wireless broadband network that would provide a free tier of service.

Meanwhile, T-Mobile--backed by the CTIA and others--is urging the FCC to pair AWS-3 with harmonious spectrum: And that's where T-Mobile's eight-city study comes into play. T-Mobile is arguing that the 1755 - 1780 MHz band would make an appropriate match for the AWS-3 block (2155-2580 MHz). However, the feds are currently using the 1755 - 1780 MHz band. T-Mobile conducted the survey, which spanned markets across the country, to determine just how much federal traffic is running over that band. The result?

"There's quite a bit of open spectrum," said Kathleen O'Brien Ham, vice president of federal regulatory affairs at T-Mobile USA (and who just so happens to be one of *FierceWireless'* 2010 Women in Wireless).

Ham said clearing the 1755 - 1780 MHz band of federal users would be a relatively straightforward process, and one with precedent: T-Mobile and the wireless industry worked to clear AWS airwaves following the auction of that spectrum in 2006. (Perhaps not surprisingly, T-Mobile was big winner in the AWS auction, and is currently using the spectrum for its 3G network--it has so far managed to cover more than 200 million people with its AWS winnings).

An FCC spokesperson did not immediately respond to questions regarding the agency's plans for the AWS-3 block. According to filings by the CTIA, the National Broadband Plan recommends the NTIA investigate pairing AWS-3 and provide results by Oct. 1; the FCC is expected to make a decision following the conclusion of NTIA's investigation.

It's no secret that the FCC under Chairman Julius Genachowski has made freeing spectrum for mobile broadband a key goal. That makes a bet on AWS-3 getting paired and auctioned at least sensible, but T-Mobile's hedging (Clearwire, Harbinger and AWS-3) is probably a wise move.

To be clear, even if everything goes as T-Mobile hopes, AWS-3 likely won't be ready for mobile broadband action for a while. But, as Ham pointed out to me, T-Mobile was late to the 3G game--it deployed its 3G network after AT&T Mobility, Verizon Wireless and Sprint Nextel--and hasn't suffered terribly as a result. In fact, Ham argued that, due to the delay, the carrier deployed 3G with the latest iteration of the network technology, thereby allowing it to quickly upgrade to the faster speeds provided by HSPA+. Since an AWS-3 auction probably won't happen quickly, T-Mobile may well be able to cash in on the economies of scale and vendor innovations driven by early LTE rollouts by Verizon (in 2010) and AT&T in (2011).

A final, important addendum: T-Mobile's Ham noted that the carrier has not decided what to do with AWS-3 spectrum if it is paired and if the carrier does get it. She said T-Mobile could use AWS-3 for either LTE or as a booster to its existing 3G network.

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## **Apple Outstrips Expectations, Sells 8.4M iPhones During Quarter**

July 20, 2010

Apple posted revenues and profits surpassing expectations during its fiscal third quarter, while its gross margin remained steady. The company said it shipped a whopping 8,398,000 iPhones during the period--a figure that includes two days of iPhone 4 sales. Apple's quarter ended June 26, and the company's latest iPhone went on sale June 24. Apple has said that it sold more than 3 million iPhone 4s.

Interestingly, Apple shipped more--8,752,000--iPhones during its previous quarter, though it did manage to beat the 5,208,000 iPhone shipments it recorded in the year-ago quarter. Apple commanded roughly 16 percent of the global smartphone market in the first quarter of this year, according to Strategy Analytics, behind market leader Nokia and No. 2 player Research In Motion.

During its quarter, Apple posted revenue of \$15.7 billion (far above Wall Street's expectations of \$14.75 billion,

according to *Reuters*) and net quarterly profit of \$3.25 billion. The numbers are a significant jump from the \$9.73 billion in revenues and net quarterly profit of \$1.83 billion Apple recorded in the year-ago quarter. The company's gross margin was 39.1 percent in the quarter, comparable to the 40.9 percent it scored in the year-ago quarter.

Apple's stock rose by around 5 percent in after-hours trading immediately following its earnings report, to around \$261 per share.

"It was a phenomenal quarter that exceeded our expectations all around, including the most successful product launch in Apple's history with iPhone 4," said Steve Jobs, Apple's CEO, also noting the company sold a total of 3.27 million iPad tablets during the period.

The news may help Apple move past the black eye it received due to "antennagate," the hoopla surrounding reports of problems with the company's iPhone 4 antenna. Apple held a press conference last week to address the issue, and promised to issue free cases to all iPhone 4 owners. (Apple said it will defer \$175 million in revenue on iPhone 4s where it has not yet delivered the free cases, and said it would expense the cases when it ships them, but did not provide a specific figure for the freebies.)

During its quarterly conference call, analysts questioned whether antennagate has slowed iPhone sales. Apple executives said the company is selling every iPhone 4 it can make, but declined to definitively answer the question.

Apple executives also acknowledged the company is seeing unexpectedly high demand for its products--namely its iPhone and iPad devices--but noted Apple doesn't foresee component supply problems. Such issues have hampered sales of other devices such as the Verizon Wireless HTC Droid Incredible, which the carrier has struggled to keep in stock due to shortages of the gadget's screen, made by Samsung.

Another question centered on the iPhone's momentum among business users. According to a *Wall Street Journal* live blog of the company's conference call, Apple's Tim Cook said more than 80 percent of Fortune 100 companies are deploying or testing the iPhone.

One analyst asked what the split was between WiFi iPad sales and those sporting 3G connections. Apple executives declined to say how many 3G iPads it sells vs. WiFi iPads. Interestingly, though, Apple executives repeatedly said the company's iPad has already moved from an early adopter to a mass market device, and that the company is selling every iPad it can make.

In addition, Apple executives reiterated their support of AT&T and declined to discuss expanding the iPhone to additional U.S. carriers.

Finally, the question on all investors' lips: Will the good times continue? "Looking ahead to the fourth fiscal quarter of 2010, we expect revenue of about \$18 billion and we expect diluted earnings per share of about \$3.44," said Peter Oppenheimer, Apple's CFO.

"We are increasing our estimates for Apple after a strong Q3 revenue and margin performance reported last night," wrote Walter Piecyk of BTIG in a research note. "We also increased our price target to \$350 from \$330 based on our higher EPS estimates."

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## **Rumor Mill: Verizon Switching to Usage-Based Data Pricing Before LTE Launch**

July 21, 2010

Verizon Wireless is planning to institute new usage-based mobile data pricing plans, perhaps as soon as the end of this month, according to a report on *Engadget*, which cited an unnamed source.

The report had few details about what the proposed plans would look like, but said that the changes could come on July 29. Verizon executives have indicated numerous times that the carrier likely will switch to a usage-based data pricing model when it launches its LTE network in the fourth quarter. However, carrier executives have not hinted at plans to change 3G data pricing options.

A Verizon spokeswoman declined to comment.

In June, Verizon Communications CFO John Killian indicated the company will change its pricing plans when Verizon launches LTE in 25-30 commercial markets later this year. "We will probably need to change the design of our pricing where it will not be totally unlimited, flat rate," he said at the time. He also said Verizon smartphone users typically gobble between 600 MB and 800 MB of data per month, which is similar to what AT&T Mobility has reported for average iPhone data usage.

After AT&T switched in June from a flat-rate pricing scheme to a usage-based model for mobile data, speculation centered on which carriers might follow suit. Both Sprint Nextel and T-Mobile USA have indicated they have no plans to change their current pricing structures.

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## **Apple Begins iPhone 4 Case Program: Apply for your Free Case or Bumper Now**

July 23, 2010

Well, there's nothing like masking bad news with good news, *right Apple?* Just moments after quietly announcing that the white iPhone 4 is now scheduled to ship sometime between tomorrow and your New Year's Eve party, the company has also fired up its iPhone 4 Case Program.

Just as Jobs promised last week at an emergency press event, this program will ensure that anyone who purchases an iPhone 4 prior to September 30th will be able to receive an iPhone 4 Bumper or select third-party case from the company at no charge. 'Course, you need to be located in a country or territory that Apple actually ships to, but if that's all squared away, feel free to hit up the App Store to download the iPhone 4 Case Program app. Once there, you'll need to sign into your iTunes Store account, select your Bumper or case and wait oh-so-patiently (read: "3 to 5 weeks"). Better hurry -- wouldn't want the servers to get overloaded, now would we?

Oh, and if you happened to have already purchased a Bumper, the company should be hitting your credit card with a full refund (including any applicable taxes and shipping) momentarily. As for the case / Bumper choices? Every single option is available in any color you like... so long as it's black, of course. There's a black Apple Bumper option, an Incase Snap Case, Belkin Shield Micra, Griffin Motif, Griffin Reveal, Speck Fitted and Speck PixelSkin HD, but again, don't go in hoping to select your favorite hue. Yeah, you're free to bicker about free things -- we won't judge.

<http://www.engadget.com>

## **Product & Service News**

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### **Verizon Trials \$50 Prepaid Unlimited Plan**

July 22, 2010

Verizon Wireless is testing a \$50 prepaid monthly unlimited plan across the Southeast.

Verizon spokeswoman Brenda Raney confirmed separate reports about the company's trial offering. According to *Prepaid Reviews* and BTIG analyst Walter Piecyk, Verizon started testing the prepaid plan earlier this week in at least 11 states in the Southeast. The plan, which is being dubbed the "Southeast save program," according to Piecyk, is only open to subscribers who have been targeted with text message and email campaigns. The service includes unlimited voice and texting, but has no data option included.

Raney said that the trials are "a special, limited-time offer to select prepay customers." She declined to provide other details about the trials.

"We suspect that in Q2 Verizon came under more pressure in its prepaid business from the increased competition over the past year," Piecyk wrote. "MetroPCS might be having increased success against Verizon in these markets. We think prepaid subscriber losses are

likely to increase on a sequential basis when Verizon reports Q2 results tomorrow."

Interestingly, TracFone rides on Verizon's network for its Straight Talk service. Straight Talk offers a \$45 plan with unlimited voice, texting and data. The Straight Talk service continues to perform well, Piecyk said, adding that "we estimate that by the end of the year, Straight Talk will be generating more revenue and profit for Verizon than its own prepaid business."

Verizon added 1.6 million net new customers in the first quarter, bringing its total subscriber base to 92.8 million. However, it added just 423,000 retail postpaid customers in the quarter.

The prepaid market has grown more crowded in recent months, with Sprint Nextel introducing several new brands into the mix. Its relaunched Virgin Mobile USA brand has a plan for \$40 per month that offers unlimited messaging, email, data and Web access with 1,200 voice minutes. Sprint is also still touting its Boost Mobile \$50 monthly unlimited service, which can now run on Sprint's national CDMA network (previously Boost was limited to Sprint's iDEN network).

<http://www.fiercewireless.com>

## New Skype 2.0.1 Allows iPhone Live Chats in 3G

July 22, 2010

After downloading the latest version of Skype from Apple's App Store, iPhone 4 users will have two options for live chats to talk to friends and family without using cell-phone minutes. Skype 2.0.1, recently adapted to use 3G signals instead of Wi-Fi, is now capable of running in the background while other apps are running to answer incoming calls, even when the phone is locked.

Together with Apple's new Wi-Fi FaceTime, that's two voice-over-Internet protocol apps to reduce talk time charged to your bill from AT&T, Apple's sole U.S. wireless carrier.

### Next Fad

"Video chat may be the next wireless fad," said J.D. Power and Associates wireless analyst Kirk Parsons. "However, it's very much dependent on having the same device -- iPhone 4 in this case -- or customers affiliated with the same carrier, like Skype. So right now it's a small percentage of the total wireless user base, but can take off fast if interoperability between devices and carriers ever becomes a reality."

Unlike Apple's FaceTime, Skype doesn't yet have access to the iPhone 4's front-facing camera, but will still allow

voice calls, and video capability can't be far off.

The iPhone 4 is one of the few smartphones to sport both front and back cameras to enable a caller to see the screen and be captured by the camera at the same time, but the feature has emerged on Android-based devices that try to mimic the iPhone experience, like the HTC EVO and some versions of the Samsung Galaxy.

"Front-facing cameras are just beginning to show up in the smartphone segment but still are very far away from becoming mainstream until that capability trickles down to non-smartphone devices and more folks get on [data](#) plans," Parsons said.

### 3G Fee-Free

Skype also announced that it has abandoned plans to charge a fee for using the service over 3G networks.

"At Skype, we believe that better call quality and better availability (which is achieved with an app capable of multitasking and/or making calls over 3G) lead to increased call frequency and longer calls," the company wrote on its official blog. "We also believe that the mobile world is in a period of significant change; for example, with some operators starting to move to tiered pricing models. In light of that, we no longer have plans to charge a supplement to make calls over 3G."

The new Skype version also allows multitasking so users can operate other apps without disconnecting a call.

Apple last month confirmed that FaceTime users who initiate or receive a standard voice call, then switch to Wi-Fi to use the video-chat app, won't keep accruing minutes for the duration of the call. That's good news for long talkers without unlimited plans who stretch their monthly limits.

There's a catch, though. The next version of FaceTime is likely to work on 3G.

<http://www.mobile-tech-today.com>

## LTE Car Debuts Before LTE Networks

July 22, 2010

In a high technology example of putting the cart before the horse, a group of companies Wednesday debuted a LTE connected car, even though there's a dearth of LTE networks up and running.

The LTE Connected Car, unveiled at the 2010 World Expo in Shanghai is loaded with infotainment features. Its sponsors include Alcatel-Lucent, Harman International Industries, QNX Software Systems Co. and Samsung. The

vehicle is based on a 2010 Shanghai Volkswagen Touran platform.

Alcatel-Lucent set up a live LTE network at the expo so the Connected Car's video/audio, online games, remote maintenance and enhanced navigation features can be demonstrated to expo-goers.

"The LTE Connected Car demonstrates HD IPTV and HD video surveillance services," states a release from the ng Connect Program, which set up the demo. "Access to the services is provided through multiple touch screens in the car for the driver and passengers."

The LTE radio antennae technology supporting the vehicle's advanced in-car communications was provided by Alcatel-Lucent. Cloud-based Video on Demand apps are provided by Alcatel-Lucent's Emerging Technology and Media group. The QNX CAR Application Platform provides system software and infotainment apps including a real-time operating system, touchscreen user interfaces, streaming media players and other features. The end-user devices connecting to the LTE network have been provided by Samsung.

The ng Connect Program and its LTE Connected Car are harbingers of other 4G/LTE programs under development including point of sale (PoS) technologies, advertising programs, gaming, and security applications. Alcatel-Lucent said the research is designed to determine how consumers can use next generation, ultra broadband networks. There are 38 global members of the ng Connect Program.

<http://www.informationweek.com>

## **Industry News**

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### **No Strong Evidence Points to Cell Phones as Hazard**

July 16, 2010

Health experts say there's no consistent evidence that cell phone radiation emissions pose a medical risk.

The most significant long-term study to date -- a 13-country analysis initiated in 2000 and published in May by the World Health Organization's International Agency for Research on Cancer -- found that cell phone users overall had no increased risk for glioma or meningioma, two common brain tumors.

The new study found a slight increase in brain tumors in a tiny subset of people who used cell phones six to 12 hours a day. Authors cautioned not to make too much of that finding, because they found it hard to believe that people

really spent that much time on the phone, says Peter Inskip an epidemiologist at the National Cancer Institute.

Analyses based on small subsets like these are notoriously unreliable, says Otis Brawley, chief medical officer for the American Cancer Society.

But he notes that "we've never studied" potential problems that could arise from more than 10 years of cell phone use. And since all previous studies have focused on adults, Brawley says scientists need to study long-term cell phone use by children, whose brains are still developing.

Brawley notes that it's really hard to study long-term effects of technology that's constantly evolving. Today's phones emit much less energy than phones in the late 1980s and early '90s, he says.

A European study, launched in March, will attempt to answer some lingering health questions by following 250,000 people for 20 to 30 years.

Scientists say radiation from cell phones is different than the kind known to cause cancer -- called ionizing radiation -- which is emitted by X-rays, nuclear bombs or even the sun. Mobile phones emit radio-frequency energy, or radio waves, a form of electromagnetic radiation also used by radios and TVs through their antennas, according to the NCI.

Unlike ionizing radiation, radio waves aren't strong enough to break chemical bonds, Inskip says.

Most research on cell phones has focused on brain cancers because people hold their phones close to their heads, Inskip says. He adds that radiation from cell phones is relatively weak, and very little radiation penetrates further than an inch into the skull.

Rates of brain cancer have remained virtually unchanged in the U.S., in spite of the massive increase in cell phone use, Inskip says. More than 285 million Americans now subscribe to mobile phone services. About 22,070 new cases of brain cancer were diagnosed in the U.S. in 2009, along with 12,920 deaths.

It's difficult to determine environmental links to cancer because people are exposed to so many potential sources of danger throughout their lives.

<http://www.mobile-tech-today.com>

## 3D Cell Phones? Some Think it's Only a Matter of Time

July 21, 2010

In the past few weeks alone we've seen the launch or introduction of the Android-powered Droid X, Evo 4G, Epic 4G, Galaxy S variants, Droid Incredible, Intercept, Flipout, Charm--and the list goes on (and that's just Android).

The crush of new handsets hitting the market again underscores the need for handset manufacturers to rise above the noise with new and unique products. Thus far such efforts have largely revolved around varying screen sizes, user interface overlays, innovative apps and other tweaks. So what's the next new thing? Sean Mitchell thinks it's going to be 3D technology.

"We're seeing huge interest now," said Mitchell, CEO of Movidius, which sells chip technology for, among other things, processing and rendering 3D images.

Others agree. "Of course, not all smartphone makers will be rolling out 3D handsets next year, but with so many Android-based devices now hitting the market, cell phone vendors will become desperate for product differentiation," wrote chip analyst Will Strauss of Forward Concepts recently. "Clearly, this could be a big differentiation from the rest of the mob."

Does this mean smartphone owners are going to have to wear special 3D glasses just to check their email? Not really, explained Mitchell. He said there actually several different technologies that can essentially "trick" the eye into seeing a 3D image without the use of special glasses (dubbed "Autostereoscopy" for those technically inclined). Among the techniques:

- **Parallax barrier.** A special material is placed over an LCD screen allowing each eye to see only a specific group of pixels. The brain then assembles the information into a 3D image. However, this approach requires that the viewer be in a specific location in order to obtain the desired effect.
- **Lenticular lenses.** An array of cylindrical lenses is positioned on an LCD display, and the lenses direct specific pixels of light to each eye.
- **Backlight barrier.** A barrier is inserted between an LCD backlight and the back of a display. A 3D image is created by manipulating the LCD backlight, thereby projecting two different, full-resolution images projected to each eye. However, this approach requires significant changes to current LCD manufacturing processes.

Movidius sells chips for high-resolution 3D video capture and display, and expects commercial phone launches with its chips in the spring of next year. The company, founded

five years ago and based in Dublin, scored a \$7.5 million Series B funding round in May.

But Movidius isn't the only 3D glasses-less game in town. Nintendo plans to release its 3D-capable 3DS portable game unit next year, and handset vendors including Samsung and others have teased the Asian market with a smattering of 3D phones.

"The next challenge is to get the capture capability" for 3D, Mitchell said, explaining that he expects cell phones to soon sport two separate, adjacent cameras, thereby enabling users to record 3D video. Surely James Cameron has already placed his order.

Will the next "Avatar" be filmed on a cell phone? Probably not, but based on the momentum behind 3D in TVs, theaters and elsewhere, don't be surprised to see cell phones soon fall into the crowd.

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