

- JAMDAT 3D Bowling (JAMDAT) – \$2.49 monthly access or \$8.99 for unlimited use purchase.

V CAST's array of hot new multimedia programming is located in the Get It Now virtual store. Customers can access video from favorite news, sports and entertainment providers in the getVIDEO shopping aisle from the Get It Now main menu. Video clips will be refreshed daily throughout the day and will be between 30 seconds and three minutes in length. Customers can check out new cutting-edge 3D games in the getGAMES aisle. V CAST also gives customers monthly access and unlimited airtime to browse applications in the other familiar Get It Now shopping aisles – such as getTONES and getGOING – but application download fees still apply.

"The value of V CAST comes not only from the quality of the experience our network provides, but also from the compelling content line-up we've assembled," said John Stratton, Verizon Wireless vice president and chief marketing officer. "Our list of content providers reads like a who's who of the news, sports, entertainment and game industries. We are offering Verizon Wireless customers a wealth of popular content in the palm of their hands at an affordable price."

#### **EV-DO 3G Network**

V CAST runs on the Verizon Wireless 3G EV-DO network that is now available in more than 30 markets across the country. The Verizon Wireless 3G EV-DO network initially launched commercially with BroadbandAccess wireless Internet access service for business customers and mobile professionals. BroadbandAccess boasts average user download speeds of 300-500 kilobits per second (kbps). BroadbandAccess customers can connect via laptop to the Internet, corporate intranets, email and attachments all at high speed.

Earlier this year, Verizon Wireless executives announced plans to continue deployment of its 3G network – its BroadbandAccess and V CAST coverage areas – to cover 150 million Americans by the end of 2005.

#### **V CAST Phones**

Customers will be able to access V CAST on three hot new phones, from LG Mobile Phones, Samsung Telecommunications America (Samsung) and UTStarcom Personal Communications. The featured phone is the new LG VX8000 phone – with its full-motion short content with audio streaming and downloading and playback capabilities, the LG VX8000 offers customers a rich and rewarding interactive experience. The LG VX8000 will be available for \$199.99 after a \$70.00 mail-in rebate with a two-year customer agreement. V CAST customers also can select from two additional V CAST phones, including the Samsung a890 that is available for \$249.99 after a \$70 rebate with a two-year customer agreement or the CDM8940 from UTStarcom Personal Communications (formerly Audiovox Communications Corp.) available for \$229.99 after a \$70 rebate with a two-year customer agreement.

For more information about Verizon Wireless products and services, visit a Verizon Wireless Communications Store, call 1-800-2 JOIN IN or go to [www.verizonwireless.com](http://www.verizonwireless.com).

**(EDITORS NOTE: Broadcast-quality B-Roll and high-resolution stills of V CAST from Verizon Wireless are available online. Log on to Verizon Wireless' Multimedia Library at [www.verizonwireless.com/multimedia](http://www.verizonwireless.com/multimedia) to preview and request video segments, which can be received in newsrooms digitally, by tape or via satellite, or to request images.)**

#### **About Verizon Wireless**

Verizon Wireless owns and operates the nation's most reliable wireless network, serving 43.8 million voice and data customers. Headquartered in Bedminster, NJ, Verizon Wireless is a joint venture of Verizon Communications (NYSE:VZ) and Vodafone (NYSE and LSE: VOD). Find more information on the Web at [www.verizonwireless.com](http://www.verizonwireless.com). To receive broadcast-quality video footage of Verizon Wireless operations, log on to the Verizon Wireless Multimedia Library at [www.verizonwireless.com/multimedia](http://www.verizonwireless.com/multimedia).

NOTE: This press release contains statements about expected future events and financial results that are forward-looking and subject to risks and uncertainties. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. The following important factors could affect future results and could cause those results to differ materially from those expressed in the forward-looking statements: materially adverse changes in economic conditions in the markets served by us, an adverse change in the ratings afforded our debt securities or those of Verizon Communications by nationally accredited ratings organizations, the effects of the substantial competition that exists in our markets, which has been intensifying, and which may intensify further as a result of local number

portability regulations that allow wireless customers to retain their phone numbers when switching wireless service providers, our ability to obtain sufficient financing to satisfy our substantial capital requirements, including to fund capital expenditures, debt repayment and distributions to our owners, our ability to obtain sufficient spectrum licenses, particularly in our most densely populated areas, our ability to develop future business opportunities, including wireless data services, and to continue to adapt to the changing conditions in the wireless industry, our ability to receive satisfactory service from our key vendors and suppliers, our ability to generate additional subscribers, with acceptable levels of churn, from resellers and distributors of our service, material changes in available technology, and technology substitution that could impact the popularity and usage of our technology, our continued provision of satisfactory service to our subscribers at an acceptable cost, in order to reduce churn, the impact of continued unionization efforts with respect to our employees, regulatory developments, including new regulations that could increase our cost of doing business or reduce demand for our services, developments in connection with existing or future litigation, and changes in our accounting assumptions that regulatory agencies, including the SEC, may require or that result from changes in the accounting rules or their application, which could result in an impact on earnings.

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## HP, T-Mobile Team on iPaq Phone/PDA Combo

By Shelley Solheim

July 26, 2004

**Updated: The iPaq handheld, which supports Wi-Fi, Bluetooth and GSM/GPRS technologies, is designed so that voice and data services can be used simultaneously.**

Major technology vendors are working together to meld for the first time multiple communications technologies in a handheld.

Hewlett-Packard Co., of Palo Alto, Calif., and T-Mobile USA Inc., of Bellevue, Wash., this week will unveil a handheld device that supports Wi-Fi, Bluetooth and GSM/GPRS (Global System for Mobile Communications/General Packet Radio Service) technologies, HP and T-Mobile officials said last week.

Meanwhile, Motorola Inc. this week will announce the availability for later this year of its CN620 clamshell mobile device, which combines Wi-Fi, IP telephony and cellular technology, said sources familiar with the company's plans.

For data services, HP's iPaq h6315 Pocket PC handheld automatically connects to the fastest-available network or switches networks if a connection is lost. When connectivity changes, users are alerted by an icon on the handheld's 3.5-inch, 16-bit color display. The GSM quad-band connectivity allows users to make international phone calls.

The h6315 is designed so that voice and data services can be used simultaneously. For example, users could make a voice call over GSM using a Bluetooth headset while e-mailing over Wi-Fi on the snap-on keyboard that ships with the handheld.

The new phone does not come bundled with any voice-over-IP software, but a T-Mobile spokesman said that third-party VOIP clients such as Skype will run on it. Voice calls made over a wireless data network would not count against a user's allowance of voice minutes, the spokesman said.

The handheld also includes a built-in VGA camera, and a camera-free version is available for security-sensitive corporate customers.

The \$499 iPaq ships Aug. 26 T-Mobile will offer bundled services for voice, unlimited data—including e-mail, instant messaging, SMS (Short Message Service)—and unlimited access to its 7,000 Wi-Fi hot spots.

Observers say the time may be right. IT manager Michael Skaff, with AdSpace Networks Inc., in Burlingame, Calif., and an eWEEK Corporate Partner, agreed that the device is compelling. "I love that they're consolidating the services and finally utilizing a lot of the wireless technologies out there," Skaff said. "It could give an edge for a lot of road warriors out there who need to be connected constantly."

Motorola officials in Schaumburg, Ill., would not comment on the plans.



**HP iPaq 4700 PDA**

HP on Monday also rolled out a new iPaq handheld computer designed specifically for business users.

With its iPaq 4700, the Palo Alto, Calif., company focused on "security, manageability and stability," said Rick Roesler, vice president of HP's Handheld Division.

Fueled by a 624MHz Intel XScale processor, the iPaq 4700 has 135MB of available memory. It includes built-in HP ProtectTools security software for data encryption and authentication.

It has a 4-inch VGA display, for easier viewing of business presentations, and a touchpad controller instead of a stylus, for easier navigation of data, said HP officials.

The iPaq 4700 is compatible with Wi-Fi and Bluetooth wireless technologies and includes software that allows users to wirelessly print documents to Bluetooth-compatible printers.

The 4700, slated to ship this fall, costs \$650.

*Ellen Muraskin contributed to this story.*

***Editor's Note:*** This story was updated to include information about the iPaq 4700 and the h6315's VOIP capabilities.



## **Verizon Wireless and Samsung Advance Wireless Camera Phone Industry With Introduction of SCH-a610**

*The SCH-a610 From Samsung Offers Unique Design and Flash Photography*

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02/10/2004

**BEDMINSTER, NJ and DALLAS, TX** — Verizon Wireless, operator of the nation's largest and most reliable wireless network, and Samsung Telecommunications America (Samsung), a wireless leader known for its award-winning product designs and advanced technology, today introduced the SCH-a610, an innovative digital camera phone featuring Verizon Wireless' Get It Now® service and Samsung's patented rotating screen design. Available exclusively from Verizon Wireless, the SCH-a610 brings consumers a total digital solution for voice, data and advanced imaging with an emphasis on performance and design. Picture Messaging service through Get It Now from Verizon Wireless makes taking and sending photos with the SCH-a610 as easy as 1-2-3; simply shoot the photo, enter a Verizon Wireless number or e-mail address, and send.



[Click to download](#)

The launch of the SCH-a610 gives consumers a glimpse of the future with unique design, premier features and award-winning Verizon Wireless service.

"We are proud of our ability to consistently provide consumers with trend-setting products and, with the introduction of the SCH-a610, we are able to strengthen Samsung's position at the forefront of wireless imaging technology," said Peter Skarzynski, senior vice president of Samsung's wireless terminals division. "With its patented rotating design and industry-leading TFT color screen, the user-friendly SCH-a610 helps raise the standard for embedded camera phones while giving consumers a stylish device to complement their lifestyles."

A standout in the camera phone genre, the SCH-a610 features Samsung's unique rotating flip design. The phone's upper screen swivels 180 degrees at the phone's midsection, giving consumers the option of turning the main screen to face outward, serving as an external color display. With the screen in this position, users can instantly identify callers via picture caller ID or easily take VGA-quality pictures in landscape mode.

In addition to its innovative design, the SCH-a610 also boasts a built-in flash, digital zoom and a vivid 65,000-color thin film transistor (TFT) screen to complement the phone's camera capabilities. Photos taken with the SCH-a610 can be customized with fun graphics that frame pictures, and consumers can use the multi-shot setting for continuous capture or take advantage of the self-timer and get into the action. Verizon Wireless customers have free access to a dedicated storage space on the Web at Pix Place ([www.vzwpix.com](http://www.vzwpix.com)) to compose, share, manage and save virtual photo albums and picture messages.

The SCH-a610 is Get It Now-enabled, offering customers the ability to download new games, ring tones and productivity tools from the Get It Now virtual store. Applications can be downloaded over the air, without hooking up to a PC or going into a Verizon Wireless Communications Store.

Customers can pay as they go for each picture message, \$0.25 for each message sent or received, plus airtime, or select from bundled picture messaging Pix Packs:

- \$2.99 per month for 20 PIX messages, and only \$0.25 for each additional message sent or received, plus airtime
- \$4.99 per month for 80 PIX messages thru December 31, 2005, and only \$0.25 for each additional message sent or received, plus airtime
- \$7.99 per month for 80 PIX messages and 500 TXT messages through December 31, 2005

If the picture message is sent to a phone that can only receive a TXT message, the cost to receive the message is just \$0.02, as the recipient receives a short text message directing them to the Pix Place Web site where they can register to view new picture messages. And whether a message is sent from phone to phone, phone to e-mail or phone to the Internet, picture messages sent to up to 10 addresses are billed as only one message sent.

Verizon Wireless customers can access Pix Place at no additional charge at [www.vzwpix.com](http://www.vzwpix.com), where they can store pictures in their own dedicated storage space and create their own photo albums. The SCH-a610 is available beginning February 10, 2004 and is offered for \$179.99 after a \$50 rebate with a two-year customer agreement. Verizon Wireless products and services are available in more than 1,200 Verizon Wireless Communications Stores, at participating RadioShack and Circuit City locations and on the Web at [www.verizonwireless.com](http://www.verizonwireless.com). For more information on picture messaging from Verizon Wireless and to view a flash demo of the service, visit [www.verizonwireless.com/getitnow](http://www.verizonwireless.com/getitnow).

#### **About Samsung Telecommunications America**

Samsung Telecommunications America, a Dallas-based subsidiary of Samsung Electronics Company, Ltd., researches, markets and develops wireless handsets and telecommunications products throughout North America. For more information, see STA's website at [www.samsungusa.com/wireless](http://www.samsungusa.com/wireless).

Samsung Electronics Co. Ltd. is a global leader in semiconductor, telecommunication, and digital convergence technology. Samsung Electronics employs approximately 70,000 people in 87 offices spanning 47 countries. The company is the world's largest producer of memory chips, TFT-LCDs, CDMA mobile phones, monitors and VCRs. Samsung Electronics consists of four main business units: Digital Media Network, Device Solution Network, Telecommunication Network and Digital Appliance Network Businesses. For more information, please visit <http://www.samsungusa.com>.

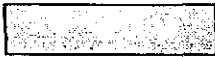
#### **About Verizon Wireless**

Verizon Wireless is the nation's leading provider of wireless communications. The company has the largest nationwide wireless voice and data network and 37.5 million customers. Headquartered in Bedminster, NJ, Verizon Wireless is a joint venture of Verizon Communications (NYSE: VZ) and Vodafone (NYSE and LSE: VOD). Find more information on the Web at [www.verizonwireless.com](http://www.verizonwireless.com). To receive broadcast-quality video footage of Verizon Wireless operations, log onto [www.thenewsmarket.com](http://www.thenewsmarket.com).

#### **About Get It Now**

Get It Now from Verizon Wireless puts a virtual software store inside a wireless phone. Customers with Get It Now-capable phones can download applications over the air and purchase them from their phones. getTXT, getIM and getEMAIL help customers stay in touch and communicate with others. getGAMES keeps customers entertained, while getGOING applications, made for today's mobile lifestyle, offers restaurant location services with maps, directions and more. View and share digital photos with getPIX, check out Web cams with getFLIX or identify incoming callers by assigning a unique ring with getTONES. getALERTS keeps customers informed while getBROWSING lets them access the Web from their wireless phone.

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## MobiTV for AT&T Wireless launches

Oct 10 - 05:48 PM ET | [AT&T Wireless](#), [Data](#)

MobiTV has linked up with AT&T wireless to provide its live TV streaming service to AT&T Wireless customers. Previously, MobiTV was limited to Sprint PCS customers.

If you are an AT&T Wireless customer interested in the service it is only available on the Motorola V600 and Nokia 6620. AT&T stopped sales of the Motorola V600 last month, but you can still get it from Amazon for \$49.99 after rebate.

The Nokia 6620 is the EDGE enabled version of the Nokia 6600 and is a Series 60 smartphone. It started shipping in August and can be purchased for \$49.99 as well.

The MobiTV service costs \$7.99 as part of an introductory offer, it will move up to \$9.99 a month at a later time. Channels vary from news to sports to comedy. A full line up is available here.

**Update:** Mobile guru Russell Beattie has a review of MobiTV on the Nokia 6620.



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Buffalo News (New York)

October 21, 2003 Tuesday, FINAL EDITION  
Correction Appended

**SECTION:** YOUR MONEY, Pg.B4

**LENGTH:** 1390 words

**HEADLINE:** WEIGH OPTIONS BEFORE DECIDING ON A CELLULAR PHONE PLAN/

**BYLINE:** LISA HAARLANDER; News Business Reporter

**BODY:**

Since cell phones **first** found their way into consumers' hands, the number of wireless providers has ballooned. Today, five of the six major cell phone providers in the nation are in the Buffalo Niagara market and the sixth is on its way. And there are numerous prepaid cellular companies, such as Cricket Communications.

With so many companies offering so many plans and options, it may be hard to decide if you should take advantage of a new rule that starts Nov. 24. Consumers in major markets can switch wireless phone companies and keep the same cellular phone number. Consumers will also be able to take their landline numbers to cell phones.

We did some research to help identify the pros and cons of each wireless company, but you'll still need to decide which company fits your calling habits.

Ask yourself what time of day you call the most. Do you need long distance? Do you want to send a lot of text message or play games online?

Here's more information about Wireless Local Number Portability or WLNP:

If you decide to switch carriers after Nov. 24, contact your new carrier **first**. You can't transfer a disconnected line.

This new portability law does not cancel any contracts you have with a wireless company. If you want to switch, you may have to pay an early termination fee.

You may need to buy a new phone. Not all phones work on all networks and support all features.

It should take no more than a day to switch a cell phone number to a new company. It could take several days to transfer your landline number to a cell phone company.

The new portability law covers only local numbers. You may not be able to take your number with you from one metro area to another.

Wireless companies cannot switch your phone number without **first** getting your permission.

In any given year, about one-third of cell phone users switch companies, said Roger Entner, a telecommunication analyst with the Yankee Group in Boston. Being able to keep the same phone number should prompt an additional 10 million to 12 million people, or 40 percent of customers, to switch.

The companies most likely to benefit from wireless number portability are T-Mobile



and Verizon Wireless, Entner said.

"The companies that will win are the ones that will differentiate either on value or quality," Entner said. "T-Mobile for value and Verizon for quality. Verizon probably has the better network for most people. It looks like they'll be the winners."

Here's why T-Mobile is seen as the leader on price. T-Mobile offers 1,000 anytime minutes for \$40. Other companies charge from \$50 to \$80 for the same number of minutes.

The increased competition should benefit consumers, Entner said. Consumers should see the price of plans remain the same but the number of minutes or other benefits increase.

"The wireless industry's preferred mode of competition is price competition," he said. "But the reason why people change -- price, quality and service -- will not change."

Tina Chaudhry, marketing director for Intercom Radio, has already marked Nov. 24 on her calendar. The last four digits of her current phone number, through T-Mobile, spell out her **first** name. Having an easy to remember number was crucial when Chaudhry helped coordinate the Taste of Buffalo.

"I had 26 board members looking for me that day," she said. "Everyone remembers this number, which is why I stuck with T-Mobile."

Although she is happy with T-Mobile's service and prices, she uses her cell phone to coordinate special events and the intense use for a few days causes her to go over her allotted minutes -- resulted in bills that total hundreds of dollars.

Chaudhry would like to switch to Nextel because of Direct Connect, a feature that allows customers to use their cell phones like walkie-talkies and not consume airtime minutes on most plans.

"Direct Connect would eliminate a lot of my phone calls and when you're at an event, you always need a walkie-talkie," Chaudhry said.

#### TABLE: STRENGTHS AND WEAKNESSES OF THE DIFFERENT WIRELESS PROVIDERS/

##### Verizon

Strengths:/ \* Verizon and **Sprint** have the largest networks and best coverage/ \* Push to Talk (walkie talkie)/ \* Fast wireless data network

Disadvantages:/ \* Verizon lacks some of the bells and whistles of other carriers, such as rollover minutes or free incoming text messages./

Sample Plans:/ \* For \$35 per month, get 300 anytime minutes and **unlimited nights and weekends**. No long distance charges./ \* For \$35 per month, get 300 anytime minutes and 250 mobile-to-mobile minutes. Each additional line is \$20 per month and gets you an extra 250 mobile-to-mobile minutes./ \* For \$60 per month, get 400 anytime minutes and **unlimited** Push to Talk calls.

## Sprint

Strengths:/ \* Can talk to other **Sprint** customers without using airtime minutes for an extra \$5 per month./ \* Voice or data feature works anywhere on the network. The networks of some competitors are not as consistent./ \* Verizon and **Sprint** have the largest networks and best coverage./

Disadvantages:/ \* **Sprint** lacks some of the bells and whistles of other carriers, such as rollover minutes or free incoming text messages./

Sample Plans:/ \* \$35 per month for 300 anytime minutes and **unlimited nights and weekends**. No long distance charges. No roaming on the **Sprint** network./ \* \$45 per month for 500 anytime minutes. Add an additional phone for \$20 per month. No roaming on the **Sprint** network./

## Cingular

Strengths:/ \* Offers features and options not available from anyone else./ \* **FastForward**: Forwards your wireless calls to your home or office numbers for \$3 per month. Uses no airtime minutes./ \* **Early Bird**: Get **night and weekend** minutes starting at 7 p.m. for \$7 per month./ \* **Rollover Minutes**: Unused anytime minutes are rolled over for up to 12 months./

Disadvantages:/ \* Network is good, but not as good as Verizon or **Sprint**./

Sample Plans:/ \* For \$30 per month, get 250 anytime minutes, 5,000 **night and weekend** minutes, long distance included./ \* For \$40 per month, get 500 anytime minutes, 5,000 **night and weekend** minutes, long distance included. Additional lines are \$10 per month and you can share your minutes. If you want **unlimited** minutes for calls between family members, add \$10 per line per month./

## Nextel

Strengths:/ \* Plans designed for businesses and high-end consumers./ \* **Direct Connect** (walkie talkie)/ \* Free incoming calls with some plans/ \* Bills to the second with some plans/

Disadvantages:/ \* If Nextel does not cover an area, there's no service. You can't roam on someone else's network./ \* Limited coverage in more rural areas./ \* No camera-ready phones./

Sample Plans:/ \* For \$40 per month get 500 anytime minutes, **unlimited night and weekend** minutes. Long distance is 20 cents per minute. **Unlimited Direct Connect**./ \* For \$60 per month, get 1,000 anytime minutes, **unlimited** nationwide **Direct Connect**, **unlimited night and weekends**. Long distance is 20 cents per minute./

## T-Mobile

Strengths:/ \* Get a lot of minutes for your money./ \* Voice or data feature works

anywhere on the network. The networks of some competitors are not as consistent./  
\* Phones work in many foreign countries, but not as many as AT&T./

Disadvantages:/ \* Limited service in more rural areas./

Sample Plans:/ \* \$40 per month for 1,000 anytime minutes or get 600 anytime minutes and **unlimited nights and weekends**. No long distance charges and no roaming charges on the T-Mobile network./ \* \$50 per month gets you two phones and 400 anytime minutes to share between them, **unlimited night and weekend** minutes, and **unlimited** calls between the two phones. Additional phones are \$10 per month./

AT&T

Strengths:/ \* No charge for incoming text messages./ \* Advanced data transfer abilities for video feed and wireless games./ \* AT&T cell phones work in more countries than other cell providers (roaming charges still apply)./

Disadvantages:/ \* Not available in the Buffalo market until later this year or early 2004./

Sample Plans:/ \* \$40 per month for 550 anytime minutes, **unlimited night and weekend** minutes, no long distance charges and no roaming fee on the AT&T network./

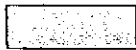
e-mail: [lhaarlander@buffnews.com](mailto:lhaarlander@buffnews.com)

**CORRECTION-DATE:** November 05, 2003

**CORRECTION:**

A chart in Tuesday's paper about cell phones said AT&T Wireless is not yet available in the Buffalo area. AT&T has authorized a few stores and dealers to begin selling AT&T phones and plans on a limited basis. [published 10/25/03]/ A \$50 T-Mobile cellular phone plan described in a chart Oct. 21 offers **unlimited** calling only on **weekends**. Specifics of the phone plan were incorrect in the chart because of erroneous information from the company. /

**LOAD-DATE:** November 7, 2003



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USA TODAY

November 24, 2003, Monday, FINAL EDITION

**SECTION: MONEY;** Pg. 1B

**LENGTH:** 1798 words

**HEADLINE:** Let the cellphone switcheroo begin

**BYLINE:** Andrew Backover

**BODY:**

Today has been dubbed Cellphone Independence Day. Consumers get to keep their cell numbers when they switch wireless carriers.

New government rules will let America's 152 million cellphone users take their current cell numbers with them to a new carrier. They must, however, switch to a carrier also serving their local area. The rule goes into effect for consumers in the top 100 markets. For customers outside those areas, they may still request to have their number transferred, but carriers have until May 24 to move it.

"Maybe we'll get a little bit more control over what we put our **money** toward now," says Randy Nisbet, 41, of Long Beach, Calif., who is in charge of five Verizon Wireless accounts for his family's property management business. He might declare his independence: He was unhappy with the service he got recently in a Verizon store. "That kind of treatment made me realize I don't have to put up with it, because I can keep my number," he says.

In the 100 largest markets, today also is the day consumers who want to drop their home phone service can move home numbers to a cellphone in the same local calling area under the new Federal Communications Commission (FCC) rules. Friday, an appeals court denied a request by local phone companies to delay the rule. While technical issues may mean it will be a while before that number switch is hassle-free, the ability to do it is expected to add to the 8 million or so consumers who have dumped land-line home phones for cellphones.

Consumer advocates overwhelmingly applaud the new rules, which they expect to force carriers -- fearful of losing customers and hopeful of stealing their rivals' -- to compete harder on prices, service and features. It's already happening: Seeing Independence Day coming, national carriers have been sweetening incentives.

Among them is Cingular Wireless, which is offering new and existing customers 500 bonus rollover minutes that can be stored for future use. **Sprint PCS** offers **unlimited night and weekend** minutes starting at 7 p.m. instead of 9 p.m. for \$ 5 per month extra. T-Mobile offers a three-day **weekend** for free domestic calls and has cut the price of its Sidekick device -- a Web-enabled phone with a keyboard for e-mail, Web browsing and text messaging -- by 33% to \$ 200.

Don Drury, 35, a brokerage manager in Dallas, says the prospect of losing his number has kept him with AT&T Wireless. But he'll consider others after hassles with his bill and customer service.

"They are going to have to think about being more considerate," Drury says. "It's going to be a lot easier to say, 'I'll just take my number and move on.' "

That's why carriers should focus as much on customer service as they do marketing, says Pete Blackshaw, chief marketing officer for PlanetFeedback.com, which lets people log complaints, compliments or suggestions for companies about their products and services. Wireless customers are very likely to share bad experiences with others, he says.

"That's troubling for the carriers, because word of mouth is far more persuasive than traditional . . . advertising," Blackshaw says. "That magnifies the pain for carriers if they screw up with consumers."

Even satisfied customers, such as Tom Freeman, 57, of Tulsa are browsing. Freeman says he might pay the \$ 200 early termination fee in his existing two-year Cingular contract if a new deal looks worth it. "That's still in the back of my mind . . . if I can find a better deal for a lower price," he says.

But deal-hunting consumers should be cautious at **first**. There are many pitfalls from "wireless local number portability." Making the wrong choice could be costly.

Issues to consider:

\* **Timing.** For consumers making few calls or businesses making thousands, waiting a few months to switch might be smart. It's unclear how many consumers will go to the trouble of switching, but if lots do, expect carriers to boost the incentives. Consultant the Management Network Group expects 24 million customers to switch wireless carriers by June 2005 because of the rule.

"Hold on tight a little bit," says Chris Murray, counsel for advocacy group Consumers Union. "The deals aren't going to get worse. The deals are likely only going to get better."

Another reason: For a while, the hassles of switching will get worse. The new rule has hit at the holiday season, which is already the busiest time of the year for wireless carriers and retail partners such as RadioShack and Best Buy.

Because transferring a cell number is a technical process requiring cooperation between fierce rivals, expect longer lines and more delays than when simply signing up for new service. And despite recent transfer testing and training of employees, this is a new type of transaction for the industry.

Bob Egan, president of analysis firm Mobile Competency, says 25% of number transfers could fail on the **first** try. That could delay a transfer, supposed to take 2.5 hours, for hours or days. "These lines are going to be filled with even more frustrated consumers," he says. "Don't be a guinea pig."

Egan says consumers should wait for Jan. 1 to switch; big businesses should wait until spring.

**Sprint** President Len Lauer says wrinkles should be ironed out by January. "It depends how urgent the customer is to make the switch," Lauer says. "If they don't have an immediate need . . . they'd probably be better off to wait until after the holiday season."

\* Do your homework. To get the best deals from carriers anxious to hold down switching, be prepared to sign up for two years. Cingular now offers three phone models free after a rebate, but consumers have to sign a two-year contract to get that deal. **Sprint** PCS requires two-year deals for consumers who want **night and weekend** calls at 7 p.m. instead of 9 p.m.

"All they are pushing now are two-year agreements," says Kirk Parsons, wireless analyst for J.D. Power and Associates. "They are trying to lock you in."

Carriers often charge \$ 200 to break a contract. Fees haven't gone up, but they aren't going down, either. And even changing to a different plan from the same carrier can mean restarting the clock on the contract term.

Consumers also need to assess their phone usage. J.D. Power says a typical wireless customer talks 365 minutes a month, yet the average number of minutes in a typical plan is more than 1,600. Only 56% of consumers say they use all their minutes monthly, it says.

Verizon Wireless service agents (or the company Web site for those registered online) will give phone usage stats to current customers. That can help them see if another plan is better. Customers looking for a new carrier can bring their current cell bills to a Verizon Wireless store to find the most appropriate plan.

When picking a plan, however, consumers should keep in mind that minutes aren't everything: A carrier's service quality can vary greatly by market. That's why consumer advocates recommend asking friends and co-workers about their experiences with a carrier before signing up, instead of basing the decision solely on price.

There also are online resources springing up to help consumers compare features, and in some cases service quality. WireFly.com is an online cellphone sales site that compares plans of the seven major U.S. carriers. NumberPortability.com and CellUpdate.com have similar features. The cellular industry also has an information site, [www.EasyPorting.com](http://www.EasyPorting.com), as does the FCC's site, [www.fcc.gov](http://www.fcc.gov).

\* Bundle up. While consumers can get great stand-alone wireless plans, they might get better deals buying cell service in a package with other telecommunications services.

Not all wireless services are available in packages, called bundles. But traditional

phone companies that also offer wireless service increasingly offer it at a discount if bought with other services, such as broadband, local wired phone service and long-distance.

"Bundles are being marketed heavily, and that is a trend that will only get stronger, not weaker," says telecom analyst Jeff Kagan.

Cingular, co-owned by local phone companies BellSouth and SBC Communications, is sold in a bundle in states where the parent companies sell local phone service. Local phone giant Verizon Communications sells wireless bundles using its stake in Verizon Wireless. Qwest Communications plans more wireless bundles soon.

In Atlanta, for example, BellSouth's Wireless Answers bundle costs \$ 80.98 a month for local phone service, calling features, **unlimited** long-distance and a national Cingular plan with 350 anytime minutes and 5,000 **night and weekend** minutes. That's an annual savings of up to \$ 330 compared with buying the services separately.

SBC offers 5% to 10% discounts on certain wireless plans if consumers agree to get one combined bill for wireless and local phone service. They get 20% off for buying wireless in a bundle of local, long-distance and Internet services.

Customers of **Sprint's** Complete Sense home phone bundle, which costs \$ 50 to \$ 60 a month for local service, features and **unlimited** long-distance, get a 5% monthly discount on most **Sprint** PCS plans.

\* Cutting the cord. It remains to be seen how many customers will want to transfer their home or business numbers to cellphones.

Millions do without wired home phones now. Indiana University junior Michael Yoo uses a Verizon Wireless phone instead of paying \$ 30 a month for a wired dorm phone. "A lot of college kids these days don't get land lines," Yoo, 20, says. "They get broadband Internet and rely on cellphones as their main form of communication."

But that has drawbacks that outweigh advantages for many consumers. For one thing, cellphone coverage is still spotty, even at different locations within the home. A signal may be strong in one room but not in another.

More important for many people, emergency operators can pinpoint the location of a 911 caller immediately if the call is from a land line. That's not yet the case in most areas for 911 calls from a cellphone. And "there is no guarantee that your call will get through," Consumers Union warns.

T-Mobile customer Bruce Lakey, 50, a project manager for the U.S. Department of Housing and Urban Development in St. Louis, says he could save **money** by moving his home number to a cellphone.

But because of some drawbacks, he doesn't think his wife will agree to give up wired service for just a cellphone until their three daughters are grown. "If they weren't there, there's no need to have a home phone," Lakey says. The home phone is stationary, and people call there and leave a message. With cellphones, "You can get your messages and calls at any time. It's more convenient."

**LOAD-DATE:** November 24, 2003





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August 22, 2004 Sunday 1 EDITION

**SECTION:** I; Pg. 16

**LENGTH:** 749 words

**HEADLINE:** SHARPENING THE FOCUS;

With improved quality and wider availability, cameraphones have moved beyond the gimmick stage

**BYLINE:** By DAVID HAYES; **The Kansas City Star**

**BODY:**

The first-generation cameraphones were little more than interesting gimmicks.

The photos they shot were small, grainy and generally fuzzy. But it was a fun gimmick. You could send those photos in real time from the ball field or the birthday party to family and friends anywhere in the world.

Cameraphones aren't just a gimmick anymore.

The first cameraphones capable of taking photos that consumers might actually want to keep and print started hitting the shelves at Sprint stores last month. And more are coming.

One-**megapixel** cameraphones are now being sold by Sprint Corp. and **Verizon Wireless**. They're the follow-ups to the first-generation, fractional-**megapixel cameras** that first hit store shelves in October 2002.

Digital **cameras** are more or less measured in **megapixels**, a term that generally measures the number of elements or dots in a photo. A one-**megapixel camera** includes one million elements, or pixels.

In general, a one-**megapixel camera** takes photos than can be enlarged to 4 by 6 inches.

Sprint is selling two one-**megapixel** cameraphones -- a fully loaded Samsung that carries a price tag to match and a more basic, more affordable model from Audiovox.

Competitor **Verizon Wireless** this month starting selling a 1.2-**megapixel**, Bluetooth-equipped phone from Motorola.

These all-in-one devices aren't ready to replace your digital or film **camera** yet. But a very informal field test last week of the Audiovox and Samsung phones found that they are a step in the right direction.

First the specs: The Samsung includes a 1.03-**megapixel camera**, the Audiovox has a 1.3-**megapixel**, and the Motorola has a 1.2-**megapixel**. The Samsung and Motorola phones also double as camcorders, taking short video clips that can be sent by e-mail. All include a built-in, short-range flash.

The loaded Samsung also has a multimedia chip that can play streaming media, including the new Sprint TV service. Sprint TV is a subscription service that shows short, almost-TV-quality news, weather, sports and entertainment clips.

All of the phones allow users to specify a few simple settings, mostly resolution, white balance and even a self-timer. They include a digital zoom, but only when shooting lower-resolution photos. The Samsung lens swivels, allowing users to easily take a self-portrait.

The Audiovox and Samsung cameraphones worked well in outdoor settings, and passably inside. Still-life photos were sharp enough for good prints, or to be blown up as the slightly fuzzy background for a 17-inch computer monitor.

Photos of moving objects tended to be a little fuzzy and more suitable for e-mail or the small telephone screen.

Tony Henning, senior analyst with Future Image Inc., a research firm for the digital photography industry, thinks the new generation of cameraphones will spur more consumers and business users to try them out.

"The value proposition of having a **camera** with you all the time to take a picture and send it from wherever you are is pretty compelling," Henning said. "A lot of business applications are waiting for a little better quality."

The industry, of course, isn't stopping at one-**megapixel cameras**. Samsung is already selling a 3.2-**megapixel** cameraphone in Korea, and Casio is selling a 3.2-**megapixel** phone in Japan.

Sprint officials haven't disclosed how many consumers are using videomail and the built-in videocamera included in several of the company's **cameras**. But the service has been popular, they said.

Len Lauer, Sprint's president, did find a novel use for the Samsung's videocamera feature.

Lauer uses the phone to take videos of his golf swing for "quick feedback on my swing plane." Carrying the pocket-size phone makes more sense than dragging a camcorder to the driving range or golf course, he said.

He offered a quick but short response when asked whether his golfing buddies would say the videocam had improved his swing:

"Ha, ha."

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One-**megapixel** phones

Audiovox PM-8920: \$299.99 before rebate, from Sprint PCS

Motorola V710:\$319.99 before rebate, from **Verizon** Wireless

Samsung MM-A700:\$399.99 before rebates, from Sprint PCS.

**LOAD-DATE:** August 22, 2004

April 25, 2005

Correction Appended

**SECTION:** Special Report; Pg. 58 Vol. 3930

**LENGTH:** 3158 words

**HEADLINE:** iPod Killers?  
New rivals take aim at the champ

**BYLINE:** By Roger O. Crockett With Heather Green and Tom Lowry in New York,  
Moon Ihlwan in Seoul, Andy Rein

**BODY:**

Sometimes wanna be your lover / Sometimes wanna be your friend

Jason Smikle couldn't get the song out of his head. A freshman at Temple University, the 19-year-old hummed the tune by hip-hop impresario Ludacris, in the shower, over breakfast, and as he walked to class. On a recent 80-degree day in Philadelphia, he started singing the lyrics while he and a buddy, who had just broken up with a girlfriend, relaxed on the campus quad. His friend whipped out his LG mobile phone, tapped a couple of keys, and presto, the melody wafted into the air. "So cool," Smikle recalls. He only wished he could download the song to his own phone on the spot. "It'd be very cool, when the moment called for it, if I could just get the song," he says.

Jason, your wish may soon be granted. Mobile phones that rock, jam, thunder, and swing are on the way. Wireless operators around the globe are working

with **music** studios, phone makers, and artists such as Sean "P. Diddy" Combs in a sweeping effort to turn the mobile phone into a go-anywhere digital jukebox. Foreign carriers such as Vodafone and SK Telecom are leading the way, and U.S. wireless players are following fast. **BusinessWeek** has learned that **Verizon Wireless**, Sprint, and **Cingular Wireless** are expected to unveil services for **downloading music** directly to wireless phones later this year. "We have a tremendous opportunity to make a big impact in **music**," says Dennis F. Strigl, CEO of **Verizon Wireless**.

With innovative services and snazzier phones, the telecom players figure they can swipe a chunk of the digital **music** market that Apple Computer Inc. cracked open with its iconic iPod. That sets the stage for a battle between two industries. On one side are Apple and the other tech players concentrated in Silicon Valley that see the computer as central to the future of **music**. On the other are telecom companies, from Finland to South Korea to the U.S., that think the mobile phone can become the center of this emerging world. "The iPod is great," says Frank Nuovo, chief designer for Nokia, the world's largest handset maker. "But no one has a stranglehold. There's nothing that keeps the mobile phone from moving into that area."

The telecom approach has several strengths Apple can't match. For starters, a quarter of the world's population already has a mobile phone. That's 1.4 billion

directly from a wireless carrier's service on the spot. ``There are lots of exciting things you can do that bring in the social dimension," says Hal R. Varian, a professor at the Haas School of Business at the University of California at Berkeley. ``Labels need a platform where they can experiment more, and they can do that with wireless."

Phone makers, meantime, are focusing on making their products more **music**-friendly. Mobile **music** skeptics argue that only tech geeks will be patient enough to navigate a **music** playlist on the cumbersome keypads and tiny screens of most phones. ``As long as the primary point of a cellphone is to be a good phone, any entertainment component will be somewhat lacking," says Jonathan Sasse, president of iRiver, a leading maker of MP3 players. But manufacturers from Motorola to Hong Kong contract manufacturer HTC are hustling to make phones easy to use. HTC's SDA has little buttons built in to the phone that let the user play, pause, fast-forward, and rewind songs. Sony Ericsson Mobile Communications' new Walkman phone and Motorola's new E680i sport built-in FM radio receivers and cables that make it a snap to transfer **music** from a PC to a phone.

Who would have thought the cell phone would evolve from a brick-sized talking device to a pocket-sized jukebox? In early April, 1973, to much fanfare, a Motorola researcher made the first reported call using a handheld wireless phone. Now, Jason Smikle and his buddies not only can talk on one, they can dance to stereo-quality tunes booming from the little gadgets. **Music** on phones is coming of age. Watch out, Apple.

How iPod's Phone Rivals Stack Up

#### iPOD

\$99 to \$449

PLUSES: The most elegant **music** player on earth. Apple offers three levels of devices -- the iPod, mini, and Shuffle -- which can store between 120 and 15,000 songs.

MINUSES: This baby doesn't do downloads over the air, make calls, or take pictures.

#### SAMSUNG SGH-I300

\$450 to \$500\*

PLUSES: A 3-gigabyte hard drive that can store 1,000 songs, scroll-wheel navigation, and iPod-quality sound.

MINUSES: Won't hit key U.S. market until yearend at the earliest, keypad buttons may be too cramped.

#### SONYERICSSON W800 WALKMAN

\$300\*

PLUSES: Funky design, capacity for at least 250 songs, battery life similar to the iPod mini, and sharp 2-megapixel camera.

MINUSES: Can't connect to some online **music** stores, let alone handle wireless **music** downloads.

#### MOTOROLA E680I

\$400 to \$600\*

PLUSES: Memory card storage of up to 600 songs, stereo-quality speakers, can handle MP3s and popular **music** file formats from Microsoft and RealNetworks.

MINUSES: Boring gray design in a clunky shape and a low-quality camera.

people, compared with 10 million iPods sold to date. Most of those cell-phone toters pay a monthly phone bill, making it a snap to add a **music** charge. Perhaps most important, wireless technology could provide access anytime, anywhere to millions of songs. ``You don't have to be a genius to see that the phone will be your own portable stereo that's with you wherever you go," says Jordan Schur, co-president of Geffen Records, whose artists include Snoop Dogg and Garbage.

To Apple, this threat may look more than a little overblown. After all, the company's elegant iPod and easy-to-use iTunes have been such breakthroughs that they sparked a musical revolution. The carefully crafted combo gives consumers a no-hassle way to buy tunes on the Net and carry every single song they own with them. Already, Apple has faced a fierce onslaught from the likes of Dell, Sony, and Microsoft, and turned it back with little more than a twist and shout. On Apr. 13, Apple is expected to have announced more than 5 million iPod sales in the latest quarter, building on its market lead. ``I absolutely love it," says Michelle Clapp, a 17-year-old student from Saratoga, Calif., who got an iPod for Christmas.

Plus, Apple has learned from the past. Some 20 years ago it lost its lead in the personal computer industry by insisting on complete control over its technology. But Apple has learned from its mistakes and is showing much more flexibility these days. It opened up its iTunes store to people using computers with Microsoft Corp.'s operating system and let partner Hewlett-Packard Co. distribute its own version of the iPod.

Threatened or not, Apple is also trying to play a role in putting **music** on phones. It's developing an iPod phone with Motorola Inc. that the pair have started marketing to wireless operators. Motorola says it expects at least one carrier will begin selling the phone this summer. If that happens, the carrier would not build its own **music** store and instead send its customers to iTunes.

But Apple has had a rough start in working with wireless operators. Most major wireless companies, including **Verizon** Wireless and Sprint, have balked at carrying the iPod phone. That's a serious impediment because the operators essentially control distribution by subsidizing phones. Why the resistance? Operators want customers to download songs over the air, directly to handsets. But with the iPod phone, customers would download songs to a PC and then copy them to the phone. ``It's hard for people in any industry to support something that cuts them out of potential future revenue streams," says Graeme Ferguson, director for global content development at Vodafone Group PLC, one of the world's largest wireless players. Apple declined to comment for this story.

The two sides also have very different perspectives on how digital **music** stores should work. **Verizon**, Sprint, and **Cingular** are expected to charge about \$2 for wireless downloads when they introduce their services, or twice the 99 cents per song on iTunes. They figure they can charge a premium for the convenience of getting songs anytime, even though customers most likely won't be able to listen to those songs anywhere but on their phones, at least initially. One knowledgeable source close to Apple says the operators are simply being unrealistic if they expect customers to pay \$2 or \$3 for a song, especially with restrictions. ``If you can get something for a buck, why would you buy it for \$3?" says the source. ``Do they think people are that dumb?"

#### A Run for the Money

What will come out of all this is not just a battle of sharp words and elbows but also a new round of innovation in digital **music**. Apple and other MP3 player makers could add wireless technology to their devices or help develop a crop of **music** phones. As

hundreds of millions of mobile devices around the world go musical, there will be an explosion in the possibilities for marketing, distributing, and listening to **music**. On Apr. 12, Capitol Records Inc. said it would release a hugely anticipated new single by the rock band Coldplay as a ringtone to **Cingular** wireless customers first, rather than on the radio. Virgin Mobile USA says it's exploring ways to couple wireless **music** downloads with news clips, lyrics, or even videos from the artist. ``A lot of people are paying attention to this new frontier and what its potential can be," says Virgin Mobile CEO Daniel H. Schulman.

International wireless operators provide a sense of what's possible at the edge of this frontier. Korea's SK Telecom Co. offers a \$5 a month **music** subscription that allows customers to download any of 700,000 songs to a phone, PC, or **music** player. That makes the subscription much more convenient than similar services in the U.S. because Korean customers can get any song they want, wherever and whenever they want it. Since the November launch, 300,000 people have signed up. ``We are not yet making money, but we see a big potential for profits from **music**," says Shin Won Soo, a senior manager in charge of SK Telecom's **music** business, which is expected to go into the black with 800,000 subscribers. That conjures up the possibility that with **music** phones, consumers around the world could opt to pay a monthly fee for all the new **music** they desire, rather than buying individual CDs when they debut.

U.S. wireless operators aren't going to cause an overnight sensation in **music**. Their first offerings are too expensive and clumsy to spark strong demand. Yet within a year or two, the operators have a real chance of giving the MP3 crowd a run for its money. The phone companies have a track record of refining their offerings until they attract the mass market. **Verizon** and its brethren have traditionally overpriced services such as broadband, long distance, and even cellular service and then lowered prices later. That's likely to be the pattern in **music**, too. ``Anyone who doubts **Verizon's** capability, I would just say, 'Watch us,'" says Strigl.

The wireless companies are coming from far behind in setting up their **music** stores. Apple spent years refining its iTunes site and already has sold more than 300 million songs. Yet the wireless companies may have one advantage if they compete against iTunes on price. Because they already bill mobile customers each month, they wouldn't have to pay credit-card charges to Visa or MasterCard. That's not much of an edge over iTunes when customers buy a \$9.99 album. But if they buy single songs for 99 cents at iTunes, the fees total a significant 17 cents to 20 cents. Bottom line: **Verizon**, **Cingular**, and Sprint could end up lowering their prices to \$1 a song and still make more profit than Apple does. ``Business models will absolutely change," says Richard S. Siber, CEO of wireless consultant SiberConsulting.

Add it up, and Apple is facing what looks like the most serious threat so far to its digital **music** dominance. Of its trio of devices, the iPod may be the least affected. Its hard drive of as much as 60 gigabytes, or 15,000 songs, makes it a **music** aficionado's dream, and no phone can match it. The iPod mini and Shuffle are more vulnerable, since their storage is well within reach of a phone's capabilities. Some experts are convinced mobile phones will become the primary devices for carrying around tunes. ``It's not a matter of if, it's a matter of when," says Scott Horn, a senior director at Microsoft Corp., which sells software for phones and **music** players.

Why are telecom players looking to steal some of Apple's thunder now? Technological advances in storage, compression, battery life, and wireless networks are making it easier to receive and store high-quality **music** on phones. Korea's Samsung Electronics just introduced a phone with a 3-gigabyte hard drive, enough to store 1,000 songs. A 10-gig phone could hit the market within two years. And the future looks wide open. Research firm Strategy Analytics estimates that in 2008 half of the 860 million cell phones sold will be able to store and play songs, up from 8%

today.

Wireless operators have seen what a gold mine **music** can be. Ringtones, the snippets of songs you can put on your phone to customize your ring, have become a huge hit. Operators charge customers \$1 to \$3 per download for a few bars of a song and keep most of that for themselves. Ringtone revenues have hit \$5.8 billion, and that's expected to reach \$9.4 billion in 2008. ``People are thirsty for **music**," says Combs. ``It's a way to express themselves and their personality." The hip-hop mogul is currently exploring the launch of a wireless **music** services company targeted to youth.

The ringtone boom has made the record labels enthusiastic supporters of the wireless companies. ``Carriers are a new kind of retailer with massive reach," says Eric Nicoli, chairman of EMI Group PLC, one of the four major **music** companies. ``Plus, they have a competitive advantage over online services because their consumers can truly make impulse purchases on their phones."

The success of ringtones has given operators the confidence to push digital **music** even further. U.S. players are moving into downloads of complete songs, radio-like services with stations for hip-hop and indie rock, and much more. A startup called Single Touch Interactive Inc., based in Encinitas, Calif., is even peddling a Hilary Duff phone packed with the teen pop sensation's **music** clips and plastered with her image. ``**Downloading music** to phones is the Next Big Thing," says Duff. ``I think it's so cool."

Work is under way to make it even cooler. One major focus is a simpler way to move songs from one device to another. The initial **downloading** services have locked tunes onto the phone partly because, unlike Internet **music** services, early technology didn't provide a way to prevent multiple copies from being released to file-sharing networks. Now, Microsoft, digital media specialist Loudeye, and mobile **music** startup Melodeo are developing systems that provide better copy protection so tracks can be moved around easily and safely.

The first iterations are crude. Nokia, in partnership with Microsoft and Loudeye Corp., provides operators with technology to send customers two copies of a track. One goes to the phone and can't be moved, and the other, a copy-protected version, goes to the PC. By yearend, Nokia will do away with this clunky workaround so a customer can buy copy-protected downloads over the air and move them freely. Operator O2 Germany, a unit of Britain's O2 PLC, will use the Nokia solution in its wireless **music** offering, launching this summer, and Vodafone may adopt it. ``Consumers are in charge here," says Vodafone's Ferguson. ``They want the freedom to do what they want with songs."

Telecom operators also are working on new ways to market digital tunes. Inside Sprint, which looks like the most **music**-savvy operator so far, execs talk about the mobile phone as if it were a modern-day jukebox. The company is offering wireless customers **Music Choice**, the same 24/7 service offered by satellite and cable-TV operators. Sprint's service lets a subscriber tune in to six different channels of **music** -- rock, hip-hop, '70s, '80s, current hits, and country -- for \$5.95 a month. Customers can't pick individual songs yet. But Sprint is working on imitating SK Telecom by providing users with hundreds of thousands of songs. It's even considering development of a mobile-phone cradle, attached to top-notch speakers, for home use.

Creative thinking inside cellular and **music** companies is leading to ways to tap into the social appeal of **music**, too. Right now, a kid sprawled on a college lawn can use his or her phone to let friends hear the latest Green Day song. With the next generation of wireless **music** technology, called superdistribution, that song could be zipped off to the phone of a friend, who could listen to it one or two times or buy it

NOKIA 7710

\$500 to \$600\*

PLUSES: Wide, bright color screen, stores different types of **music** files, expandable memory can store 300 songs.

MINUSES: No keypad, stylus only. Risk of face sticking to screen during calls.

\* Overseas prices. Not available in U.S.

#### Bringing Tunes to the Cell Phone

Apple Computer reigns supreme in selling **music** downloads over the Net, but wireless operators around the world are moving to stake their claim in digital **music**. Their secret weapon? Cell phones that are becoming **music** players. By 2008, half of the 860 million cell phones sold will play **music**.

#### RINGTONE MANIA

These snippets of songs cost \$1 to \$3 and replace the ring you hear when someone calls. They've become a gold mine. Revenues are expected to reach \$9.4 billion by 2008.

**STREAMING MUSIC** Sprint is alone among major carriers in the U.S. in offering 24/7 streaming **music**. For as little as \$5.95 a month, users choose among six channels of radio-like programmed **music**, from '80s hits to country tunes. Upstarts are working on technology to put satellite radio on mobile phones, too.

**WALLED GARDEN** Last year, Europe's Orange and Vodafone began selling complete song downloads for \$2.80. For now, songs can't be moved to another device. U.S. carriers are expected to introduce similar services with slightly lower prices by August.

**UNIVERSAL JUKEBOX** In November, Korea's SK Telecom launched what could be the future of **music** on phones. It's offering a \$5-a-month service, called Melon, that allows unlimited downloads from a library of 700,000 tunes. Unlike subscription services in the U.S., Melon lets customers get a new song without a PC. That makes it a potential game changer: You can get any song you want anytime, anywhere -- for \$60 a year.

**DOWNLOADS UNLEASHED** Wireless operators are beginning to let customers buy **music** with their phones and then put it on other devices. Korea's SK Telecom is selling such downloads for 50 cents a song. 02 Germany plans a similar service later this year.

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**CORRECTION-DATE:** May 2, 2005

**CORRECTION:**



The cover photo/illustration for ``The iPod killers'' (Apr. 25) should have been credited to Roger Kenny and David Rudes/BW, with photography by Nicholas Eveleigh.

**GRAPHIC:** illustration, Illustration: Chart: HELLO **MUSIC** CHART BY LAUREL DAUNIS-ALLEN/BW

photograph, Photograph: THE THREAT People may start using cell phones as jukeboxes PHOTO ILLUSTRATION BY ROGER KENNY WITH PHOTO BY BRAD WILSON/PHOTONICA

photograph, Photograph: HIP-HOP MOGUL P. DIDDY IS EXPLORING THE LAUNCH OF A WIRELESS SERVICE CHOCK-FULL OF **MUSIC** PHOTOGRAPH BY RICHARD PHIBBS/CORBIS OUTLINE

photograph, Photograph: A STARTUP IS PEDDLING A HILARY DUFF PHONE PACKED WITH HER **MUSIC** CLIPS PHOTOGRAPH BY DANIELLE LEVITT/CORBIS OUTLINE

**LOAD-DATE:** April 21, 2005