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TELECOMMUNICATIONS

Airwave sale sparks a scramble

Opening up a new slice of the spectrum will vastly expand wireless capacity, and major players want a piece.

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WASHINGTON — They're the superheroes of the airwaves, invisible signals that can carry data faster than a speeding bullet, powerful enough to penetrate the thickest walls of homes and office buildings, able to leap long distances between transmission towers in a single bound.

The federal government's decision to auction off this prime public spectrum next month could change the wireless world. It has the potential to make talking on a cellphone, surfing the Web on a mobile device and even watching television on your handset easier and cheaper.

Google Inc. said Friday that it would bid, and a slew of other companies were expected to file to join them by Monday's deadline. Analysts expect Verizon Communications Inc. to be one of the major players. The nation's No. 2 wireless provider this week said it would allow customers to use whatever handsets they wanted on the Verizon network -- a move analysts believed was triggered by new open-access requirements imposed on companies to participate in the upcoming auction.

So even though the coveted airwaves won't be available until early 2009, when TV broadcasters give them up as they convert to all-digital signals, they're already transforming the mobile marketplace.

Federal officials hope the spectrum will produce another national competitor to existing wireless companies and lead to the creation of the long-desired "third pipe" of high-speed Internet access to consumers to vie with phone and cable service.

"It's going to allow for a truly next generation of advanced wireless services," Federal Communications Commission Chairman Kevin J. Martin said.

The complicated auction run by the agency will take weeks to complete and is expected to raise upward of \$20 billion for the U.S. Treasury. For consumers, it could launch a new wireless era in which networks are open to whatever devices or applications people want to use, and scanning websites and watching streaming video are as common as making phone calls and sending text messages.

"This auction potentially opens up mobile computing from something that's very expensive and very limited to something that comes into everyday use," said Harold Feld, senior vice president of the Media Access Project, a public interest law firm that has pushed for more open use of the airwaves.

The spectrum promises to help the U.S. catch up with Asia and Europe in the availability and speeds of wireless Internet and other mobile services.

But it's not all about shopping online while at the beach or watching TV in the back seat of the car. Some of the spectrum has been set aside for emergency personnel so firefighters and police officers from different departments can communicate better during disasters.

The lure of the prime spectrum enticed Google, which wants to extend its Internet empire to the wireless world. And the clout of the deep-pocketed search giant, pushing the FCC to loosen the rules for about one-third of the new spectrum, has helped crack open the traditionally closed mobile world.

"No matter which bidder ultimately prevails, the real winners of this auction are American consumers, who likely will see more choices than ever before in how they access the Internet," Google Chief Executive Eric Schmidt said Friday in a statement.

Mobile advertising, which is expected to grow dramatically, is one of Google's biggest potential new markets. The company has had difficulty getting products such as its search engine and Google Maps onto mobile phones in ways that make them easy for consumers to use.

That's why Google last month formed a consortium with handset makers, technology companies and phone carriers, including Sprint Nextel Corp. and T-Mobile USA, to offer free software for mobile phones. Although the company has been mum on whether it will offer its own handset -- the much-rumored GPhone -- it has built transmission towers on its Mountain View, Calif., campus to experiment with high-speed wireless.

For Google to really go mobile, it needs changes in the existing marketplace, where phone companies operate systems largely closed to unapproved devices and applications.

"Their basic strategic objective is to make sure the wireless Internet resembles the wired Internet," said Blair Levin, an analyst at brokerage Stifel, Nicolaus & Co. "Right now they are very different."

Google is trying to change that, and the soon-to-be auctioned spectrum is the key.

The airwaves are considered the beachfront of the wireless landscape. Used for years for TV broadcasts, the chunk of spectrum in the 700-megahertz band carries data much farther than other bands, requiring fewer transmission towers. And it can easily penetrate obstacles, making it ideal for streaming video, which requires an uninterrupted signal.

"For the same reason you can get TV reception in your basement, the low-frequency TV bands cut easily through walls and trees and bad weather," said Michael Calabrese, director of the Wireless Future Program at the New America Foundation, a Washington think tank. "You can get better coverage for about one-fourth the cost."

Add the fact that this is the last large block of spectrum expected to be available for years, and the auction's stakes become super-sized. Public interest groups already were pushing to free the spectrum from the closed regulations of the large wireless companies when Google joined their cause this year.

This summer, Google promised to bid in the auction if the FCC agreed to make the new airwaves more open. Martin and the FCC agreed to one part of Google's push, requiring whoever wins the spectrum to allow people to use any device or software on it. But Martin balked at Google's more controversial request -- requiring the new spectrum's license holders to allow any company to use the airwaves at wholesale prices.

"Maybe they didn't get everything they asked for, but they got something, and it's really shaken everybody up," said Bob Williams, director of [hearusunow.org](http://www.hearusunow.org), the telecommunications and media website for Consumers Union.

Although Google will bid in the spectrum auction, which starts Jan. 24, it may not try hard to win. Analysts estimate that it could cost the company \$10 billion -- on top of the billions to acquire the spectrum -- for the transmission towers and other infrastructure needed for its own network.

With the requirement to allow any device or application to operate on the spectrum, however, Google could get into the mobile market without having to actually build and operate a network.

But there's a catch. Under Martin's plan, the openness requirement disappears if the minimum \$4.6-billion bid is not met, something major phone companies such as Verizon and AT&T Inc., which opposed the requirement, would prefer.

So even though Google is jumping into the auction -- Schmidt said Friday that the company wanted "to put our money where our principles are" -- it might also quickly jump out.

"There are a lot of people, myself included, who think that is their fundamental strategy: to bid . . . and trust that Verizon bids \$4.61 billion," Levin said. "At that point they accomplished their goal."

The threat of Google starting its own wide-open network will force Verizon to bid aggressively to beat it out, Jason Armstrong, a telecommunications analyst at Goldman Sachs, predicted in a conference call with investors Friday.

Verizon has said it intends to participate in the auction, but has declined to comment on its strategy. The strategy of AT&T, the largest wireless provider, is even less clear.

The company spent \$2.5 billion in October to buy spectrum licenses in the same band in 281 markets from Aloha Partners, so it may not need to buy much of the newly available spectrum, which will be auctioned in large and small chunks that serve different U.S. markets.

But AT&T will participate in the auction, one that could end up rocking the wireless world.

"We refer to it as 'beachfront property,' " AT&T Chief Executive Randall Stephenson said this week. "It doesn't get any better than this."

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