Sides press for advantage in airwaves auction

By Carolyn Y. Johnson, Globe Staff | June 18, 2007

Telecommunications giants and entrepreneurs are squaring off over a valuable chunk of airwaves often touted as the last beachfront property in the wireless world.

With a slice of radio spectrum valued as high as $20 billion coming up for auction, academics, consumer advocates, and small businesses are pushing federal regulators to set rules that ensure that the space is used to foster innovation and not simply sold to the major wireless carriers.

"What we're really looking at is the building blocks of a new broadband service, with all sorts of new equipment and all sorts of new services," said Art Brodsky, communications director for Public Knowledge, part of a coalition of consumer groups pressuring the Federal Communications Commission to use the auction to create new competition. "An opportunity like this won't come around again any time soon in the wireless area."

Few people think about the electromagnetic waves that carry TV signals, radio stations, cellphone calls, and text messages, but the FCC's spectrum auctions over the past 13 years have brought in close to $28 billion and helped shape the modern telecom landscape.

Consumer advocates would like to see the FCC bar whomever wins the auction from warehousing the space. They also want the commission to require that any wireless device -- not just phones sanctioned and sold by the winning bidder -- be allowed to connect to the new spectrum.

the network, which could encourage entrepreneurs to create new devices and services.

Without FCC intervention, the advocates argue, the spectrum will fall into the hands of the major carriers, which often control which phones can connect to their systems and restrict what services customers can access.

The FCC's decision could determine whether the future is "more of the same or something new and nifty," Brodsky said.

Wireless companies argue that the free market has already led to significant innovation and point out that anyone is free to bid at the auction. "Consumers are using a credit card-sized phone to surf the Web, take and send photos, listen to their favorite music, watch video, and text message," said Joe Farren, spokesman for CTIA-The Wireless Association, a trade organization that represents the wireless companies. "Any suggestion that there's not innovation, and competition, in the wireless marketplace is simply a lie."

Proposals on the table from new players, including Internet search colossus Google Inc. and startup Frontline Wireless LLC, argue that the FCC should take actions to encourage new wireless entrants. Congress has stipulated that a portion of the spectrum will be set aside to create a nationwide public safety network that will help solve communications problems that became apparent in the aftermath of disasters such as the Sept. 11 terrorist attacks and Hurricane Katrina.

Prized by engineers for its ability to travel through trees, buildings, and bad weather, the 700 megahertz spectrum must be auctioned by January, and the FCC is expected to set the final rules this summer. The spectrum, once used to air TV channels 52 to 69, is opening up as broadcasters make the transition to digital transmission.

The proposals the FCC is considering include buildout provisions intended to ensure that the spectrum is used to bridge the "digital divide" -- in which urban areas often have access to high-speed Internet while rural areas are stuck using dial-up.

The new airwaves create the potential for open, nationwide wireless broadband at a time when the United States has fallen from fourth in the world in broadband penetration in 2001 to 15th in 2006 among the 30 countries studied by the Organisation for Economic Cooperation and Development.

A coalition of wireless entrepreneurs also say that opening the spectrum is the key to faster innovation.

"From firsthand experience we know that negotiation with the large carriers for access to their networks can be a difficult and time-consuming process that can add months if not years to the launch of a venture," Amol R. Sarva, founder of Virgin Mobile USA, said in his written statement to the Senate Commerce Committee. "The 700 MHz auction could prove to be a pivotal event in the history of the wireless industry."

Despite the competition in the wireless world, some draw an analogy between today's wireless world and the telephone industry of the 1950s, when consumers leased their phones from the phone
company. In the landmark 1968 "Carterfone" decision, the FCC ruled that AT&T could not restrict which devices could be hooked up to the network, making way for innovations such as answering machines, fax machines, and modems.

"Nobody predicted any of that," said Vanu Bose, chief executive of Vanu Inc. in Cambridge and a partner in Frontline, which has proposed building an open network for public safety and commercial use. "In many ways what we're advocating for is Carterfone for wireless."

Opening the cellphone world could benefit consumers in unanticipated ways, Bose said, but it could also benefit the local economy.

Major telecom companies are not headquartered here, but the state is home to businesses that build infrastructure, software, and wireless applications. Bose's company, for instance, has devised software and hardware that allow cellphone carriers the flexibility to carry calls using different network technologies.

"Any time you open up new spectrum and add new ways of delivering broadband, it tends to help small Massachusetts companies," said Mark Horan, executive director of the Massachusetts Network Communications Council.

A world in which the wireless Internet can connect to any device could encourage experimentation.

If spectrum becomes more widely available to smaller players, one can envision a day when someone driving pings the refrigerator at home and gets a list of the contents to see what else he or she would like when shopping, adjusts a thermostat, or connects every device in the home, with content flowing from appliances to computers to mobile devices, said Michael Calabrese, director of the Wireless Future Program at the New America Foundation.

"I started the auction process when I was the chair," and this will be the last auction of this significance, said Reed Hundt, Frontline's vice chairman and a former head of the FCC. "So this is kind of it, in terms of shaping the industry."

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A section of the airwaves used to transmit TV channels are slated to go on the auction block. Some will be set aside for public safety, but activists hope that the valuable chunk of spectrum will become an open access wireless broadband network.

**Some everyday uses of the radio frequency spectrum**

- **Radio**
- **Remote control**
- **TV**
- **Cellphones**
- **GP**
- **Medical**
- **WiFi, Bluetooth, microwaves, pagers, satellite and cordless phones, walkie-talkies**
- **Weather**
- **Public safety, alarms, toll tags**

Value of spectrum compared with real state

- **Fifth Avenue, New York City**
- **Upscale suburb**
- **Productive farmland**
- **Desert**

**SOURCE:** New America Foundation; FCC

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