

# FHH Telecom Law

Current Issues in Telecommunications Law and Regulation

April 2005



No more Vonage bondage

## VoIP Unblocked

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The FCC moved swiftly to prevent a rural telephone company's blocking its customers from using VoIP services provided by Vonage, sending a message that such actions would not be tolerated.

Madison River admitted that it was blocking subscribers to Vonage, a competing phone service. Vonage became aware of this action when its customers in certain communities, all served by the same telephone company, were unable to access their high-speed Internet connections to reach the Vonage services. Vonage filed a complaint with the FCC. Within days, the FCC issued a Letter of Inquiry to Madison River, requesting information to determine whether it was blocking ports used for VoIP applications. The FCC subsequently reached a Consent Decree with Madison River, under which the company would immediately cease blocking ports for VoIP services and make a "voluntary payment" in the amount of \$15,000 to the U.S. Treasury.



## FCC, Court OK Tying DSL to Voice Service

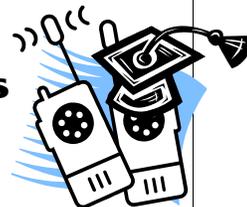
The FCC has told the states they cannot require a local telephone company to sell DSL service to users who buy their local phone service from a different provider. The decision stems from the FCC's *Triennial Review Remand Order*, which in turn rests on the FCC's reading of the Communications Act.

Just days earlier, a federal trial court in New York City reached the same result on different grounds, ruling that Verizon does not violate the antitrust laws when it refuses DSL service to a user who does not take local phone service from Verizon.

"Smart radios" get smarter

## New Rules Foster Cognitive Radios

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A recent FCC order eases the transition to cognitive radios, a category that is still novel today but likely to become increasingly commonplace in the near future. Cognitive radios are an outgrowth of software-defined radios (SDRs), which the FCC first approved in 2001. Most modern transmitters -- mobile phones, walkie-talkies, and all the rest -- have long operated under software control, an approach that enables manufacturers to bring out new models by installing new software on the same hardware platform. Until 2001, each such new model required a new FCC certification. With the rule change that year, an SDR became able to accept new software that alters its basic transmission characteristics without having to be recertified.

Cognitive radios go the next step beyond SDRs: they change their own performance characteristics according to conditions they detect in the spectrum from moment to moment, in accordance with programming that can also change over time. A future form of cognitive radios may be able to lease spectrum "on the fly," relinquish the spectrum when a higher-priority user needs it, and instantly lease replacement frequencies, all without interrupting an ongoing communication. Oversimplifying, an SDR uses software to determine *how* to transmit, while a cognitive radio also uses software to decide *when* to transmit with various characteristics.

The recent rule changes are intended to ease the evolution of SDRs into cognitive radios. Most important for the long term, the FCC approved the principle of "interruptible spectrum leasing," by which a licensee can release and reclaim spectrum as needed. The FCC outlined three technical approaches to accomplish this, but will accept any method that gives the licensee adequate control.

(Continued on page 3)



*Everybody into the pool!!!*

## Flexible Use for 900 MHz

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**P**roposed FCC rules would allow flexible use and geographic area licensing of 199 channels allocated to the Business and Industrial/Land Transportation (B/ILT) Pools in the 896-901/935-940 MHz (900 MHz) bands. The Commission believes this approach will yield more efficient use of 900 MHz spectrum and help to facilitate the ongoing reconfiguration at 800 MHz.

Beginning in 1986, the FCC divided 10 MHz of spectrum in the 900 MHz bands among the Specialized Mobile Radio (SMR) Pool, the Industrial/Land Transportation Pool, and the Business Pool. The 1990s saw reclassification of most SMR licensees as commercial mobile radio service (CMRS) providers and the creation of service rules, auction rules, and geographic licensing rules for 900 MHz SMR licenses.

To date, the B/ILT frequencies have remained limited to private, internal use systems on a site-by-site basis. In July 2004, however, in connection with efforts to address interference concerns for 800 MHz public safety communications, the FCC consolidated B/ILT Pools in the 800 MHz and 900 MHz bands, permitting any B/ILT licensee to be licensed on the consolidated channels. Further, the FCC allowed 900 MHz B/ILT licensees to commence CMRS operations on their licensed spectrum and to assign their licenses to others for CMRS use. These changes resulted in an unexpected number of applications for new 900 MHz licenses. Raising concerns that too many new 900 MHz authorizations might compromise 800 MHz band reconfiguration, the FCC put a freeze on applications for new 900 MHz licenses.

With its proposed rules, the FCC now hopes to bring the B/ILT Pools up to speed with neighboring spectrum. It seeks comment on proposals to allow flexible use of remaining 900 MHz spectrum (*i.e.*, any use consistent with the band's fixed and mobile allocations), and to license such spectrum on the basis of geographic area rather than site by site. The FCC also proposes to auction mutually exclusive applications. This licensing scheme is consistent with 900 MHz SMR service.

Specific issues on which the FCC seeks comment include size of licensing areas; channel block size, aggregation, and eligibility; operational flexibility; treatment of incumbents (including interference protection); performance requirements; other operating and technical rules; and auction rules.

*It's April, 2005 - Do you know where your proceedings are?*

**Due dates for filings in FCC proceedings  
are subject to last-minute change.**

**Call us any time  
for current information.**

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# Ultra-Wideband Powers Up

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**T**he FCC granted manufacturers of ultra-wideband (UWB) radio transmitters a waiver that will allow them to significantly increase operating power.

The UWB industry has been split over a standards fight between a modulation called MB-OFDM, which "hops" a UWB signal from one band to another, and DS-UWB, whose signal spreads simultaneously across several gigahertz of bandwidth. FCC rules require a hopping device to be tested for compliance with the hopping turned off, so the signal stays in one frequency band. MB-OFDM proponents argued this procedure overestimates the actual average power,

thus penalizing MB-OFDM relative to DS-UWB. Not so, said the DS-UWB interests. DS-UWB radios operate in short bursts, and the FCC rules require testing them with the signal locked on, so the test overestimates their power, too.

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*Both ultra-wideband modulation methods will be able to increase their operating power several-fold, relative to the current rules.*

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Solomon-like, the FCC granted a waiver to both groups, allowing both types of devices to be tested in their "normal operating mode." This means both categories will be able to increase their operating power several-fold, relative to the current rules. The FCC has promised to follow with a further rulemaking on UWB testing procedures and power limits.



*(Cognitive Radio - continued from page 1)*

The FCC also made several changes to the preexisting SDR rules. First, it broadened the definition of SDR to include radios whose modifiable software can alter not only operating parameters, such as frequency and power, but the use of those parameters, such as the capability to automatically seek out vacant frequencies. Second, where the manufacturer of a radio controlled by modifiable software could formerly choose SDR status as an option, now any such radio whose software is designed or expected to be modified by parties other than the manufacturer *must* be certified as an SDR. Third, the FCC is suggesting (but not requiring) specific methods to ensure security in SDR software. Manufacturers are allowed to use any reasonable method. Fourth, the FCC

dropped a prior requirement that manufacturers give it copies of software on request. Fifth, the certification application now must include a "high level operational description" or flow diagram of the software that controls radio-frequency parameters. (The FCC will protect this information from public disclosure.) Sixth, the FCC will certify unlicensed transmitters capable of operating outside the unlicensed bands under the SDR rules, subject to certain safeguards to prevent unauthorized transmissions.

Manufacturers have been slow to take advantage of the SDR rules. More than three years after SDRs were first authorized, only one has been certified. The new rules are likely to make the technology more attractive to manufacturers.

*Satellite ancillary or ersatz cell substitute?*

## Limits Laid for Land-Based Sat Service Systems

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**T**he FCC has clarified its rules governing terrestrial repeaters for Mobile Satellite Service (MSS). In 2003, the FCC first allowed the use of tower-mounted antennas called Ancillary Terrestrial Components (ATCs) to improve satellite phone service in areas where satellite reception/transmission is blocked by terrain or buildings. Now the FCC has addressed objections raised by various parties and clarified other operational and licensing matters.

Cell and PCS companies were concerned that the ATC networks of MSS providers would morph into entirely terrestrial competitors. But the FCC reaffirmed that ATCs must operate in conjunction with MSS, and not as a separate stand-alone service. MSS providers can prove that integration by offering dual-mode handsets, *i.e.*, phones capable of sending/receiving both satellite and ATC transmissions. To give MSS operators flexibility, however, the FCC rejected proposals to set specific minimum traffic requirements over the satellite portion of MSS/ATC networks, although it will entertain complaints that providers' ATC facilities are not truly ancillary to their satellite service. The FCC also confirmed that MSS operators cannot offer ATC-only subscriptions.

Next, the FCC addressed uplink and downlink interference issues. The new order changes the basis for uplink interference protection in the MSS L-Band from specific technical requirements to more general limits on how much uplink interference the new ATC systems can cause to other MSS operators. For downlink interference, the FCC will now permit power limits on most ATC base stations 8 dB higher than previously allowed. New testing by the FCC since 2003 has also resulted in special limits on geographic location and power levels near airports and navigable waterways, designed to protect aircraft and marine communications from ATC base station interference.

Finally, over objections from Cingular, the FCC reaffirmed that new ATC licenses are not subject to the rules requiring auctions for new spectrum licenses. Since the ATC facilities operate in the same spectrum bands as the primary MSS satellite service, the new licenses are not modifications that are so different or large as to require competitive bidding. Rather, MSS applications to build and operate ATC facilities will be treated as applications for minor modifications, subject to public notice and comment.

AT&T Wireless and Verizon Wireless still have a court challenge pending to all of the ATC rules.

## Earth Station Licensing Streamlined

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**N**ew FCC licensing rules should expedite the processing of non-routine earth station applications -- typically, those that propose smaller antenna diameters or higher power levels than are routinely authorized. Such earth stations are often used to provide satellite-based broadband internet access.

The FCC adopted two new streamlined procedures for smaller-than-routine earth stations. Applicants can certify prior coordination with satellite operators to demonstrate there will be no unacceptable interference to space station operations, and also can specify power levels low enough to prevent adjacent satellite interference. Prior coordination is available to stations proposing higher-than-routine power levels.

In addition, the FCC updated the rules for Very Small Aperture Terminals (VSAT) networks that use Code Division Multiple Access (CDMA), harmonizing the requirements for different frequency bands. It also proposed rules that would give earth station operators more flexibility to adjust operations to meet marketplace demands.



*The FCC rolls out the welcome mat*

## 3650-3700 MHz Opened to Wireless Broadband

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**T**he FCC's rules giving wireless broadband providers access to the 3650-3700 MHz band apply a novel hybrid licensing regime, which draws from both licensed and unlicensed regulatory models.

The rules authorize an unlimited number of non-exclusive nationwide licenses that must employ "contention-based" protocols to minimize interference among fixed and mobile operations. Licensees must electronically register each base station with the FCC. The registration will permit licensees to locate each other's operations and help to protect the grandfathered fixed satellite service ("FSS") earth stations and federal government radiolocation stations already operating in the band. These receive protection zones with radii of 150 km and 80 km, respectively, within which the wireless broadband licensees need the incumbent's consent to operate. New FSS earth stations will continue to be authorized in the band on a secondary basis.

All wireless broadband licensees must cooperate in avoiding interference to one another. To keep

them away from protected incumbents, mobile stations must affirmatively receive and decode an enabling signal from a base station before they can transmit. Mobile-to-mobile operations are permitted, so long as each unit can receive an enabling signal (not necessarily from the same base station). Fixed and base stations can operate with a peak power limit of 25 watts per 25 MHz bandwidth. Mobile and portable stations will be limited to a peak power limit of 1 watt per 25 MHz bandwidth. There are no eligibility restrictions for licensing in the band (other than statutory restrictions on foreign ownership), no in-band or out-of-band spectrum aggregation limits, no restrictions on assignment and transfer, and ten-year license terms with the right to renew.

The FCC expects these rules to facilitate use of the band by Wireless Internet Service Providers (WISPs) and to foster the deployment of new wireless broadband technologies, such as Wi-Max.

*The FCC expects these rules to facilitate use of the band by WISPs and to foster deployment of new wireless broadband technologies.*



*Can you dig it?*

## Drillers, Tillers: Call 811

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**T**he FCC has designated phone number "811" for giving prior notice of excavation operations to owners of underground facilities. The new rules are an effort to comply with the Pipeline Safety Improvement Act of 2002.

Calls to 811 will be routed to a One Call Center, which will inform utility owners or operators in the affected area that contractors plan to excavate nearby. Many accidents in the past have caused damage to underground pipelines because contractors did not provide notice prior to digging. The FCC hopes the

811 number will cut down on these costly and inconvenient incidents.

Of the eight possible "N11" codes, 211 through 911, the FCC had previously assigned five: 211 for information and referral services; 311 for non-emergency police; 511 for travel and information services; 711 for telephone relay services for the hearing impaired; and 911 for emergencies. 411 and 611 are widely used by carriers for directory assistance and support services, respectively, but without the blessing of the FCC.



Commission bows to states on dunnings' IDs

## Shillers: Do-Not-Call Update

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**T**he FCC has updated its rules on the national do-not-call registry and other telemarketing controls.

These rules stem from the 1991 Telephone Consumer Protection Act passed to address the then-growing problem of telephone marketing calls and telemarketing practices Congress found to be an invasion of privacy. The statute authorized the FCC to establish and operate the do-not-call registry, a national database of residential telephone subscribers who object to receiving telephone solicitations. It also restricts the use of automatic telephone dialing systems, artificial or prerecorded voice messages, and unsolicited ads by fax.

The registry went into effect on October 1, 2003, with enforcement coordinated between the FCC and the FTC. The registry is nationwide in scope, includes all telemarketers (with the exception of certain non-profit organizations), and covers interstate and intrastate telemarketing calls. The rules supersede all less restrictive state do-not-call rules, although in principle states

may adopt more restrictive laws as to intrastate calls. Previous FCC actions also restricted the use of predictive dialers (which call a consumer automatically whether or not an agent is ready to talk), specified that telemarketers cannot block caller ID, and tightened the rules on unsolicited faxes.

The new order clarifies that calls made for the purpose of debt collection need not identify the caller's

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*The FCC explained that a company may not communicate by telephone even with an existing customer who has made a company-specific do-not-call request.*

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state-registered name in prerecorded messages if doing so would conflict with federal or state laws. The FCC also stated that a notice printed on the bill satisfies a carrier's obligation to provide annual notice of the opportunity to sign up for the do-not-call registry. Clearing up a conflict between two rules, the FCC explained that a company may not communicate by telephone even with an exist-

ing customer who has made a company-specific do-not-call request.

Consumers can join the do-not-call registry by calling toll-free 1-888-382-1222 or by registering at [www.donotcall.gov](http://www.donotcall.gov).



Whose line item is it anyway?

## Billers: Tell the Truth

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**N**o longer exempt from the FCC's truth-in-billing rules, mobile phone providers must now avoid any language in their bills suggesting that a discretionary charge is a tax or government fee.

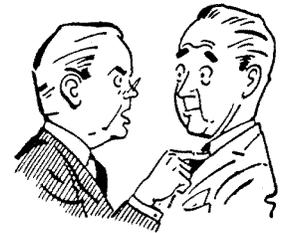
In a further rulemaking, the FCC will determine exactly what constitutes a government mandated charge, and whether carriers should be allowed to combine all federally-mandated charges into a single

line item. The FCC also seeks comment on its tentative conclusions that a break-out of government mandated charges on a bill must be placed in a separate section. The proposed rules would preempt any inconsistent state rules, essentially creating a national truth-in-billing regime, but leave intact state consumer protections in other areas that affect mobile telephone service.

Commission requires that phone companies communicate

## Billers: Talk to Each Other

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**T**he FCC has adopted minimum standards for information exchange on customer accounts between LECs (local phone companies) and IXCs (long-distance carriers), on a finding that the previous voluntary regime had failed.

Customers who tell their LEC to switch long distance carriers sometimes continue to receive bills for long distance charges unrelated to actual usage. At the same time, long distance companies often carry calls from unknown consumers they cannot bill. These consumers may actually have requested the LEC to route calls to that long-distance provider, but the long distance carrier, lacking proper billing information, responds by shutting down service. Consumers then have to make multiple calls to both the LEC and the IXC to straighten out what should be a simple change in a competitive telecommunications marketplace.

The FCC cited industry-supplied statistics that nearly 60 percent of LECs and IXCs do not participate in any exchange of customer information. As a result, consumers are frustrated, local carriers get harangued, and long distance companies bill incorrectly.

The FCC order requires LECs and IXCs to provide

each other with customer account information whenever either handles a customer order to establish, change, or eliminate presubscribed long distance carrier service. An LEC must also supply billing information, when requested, after calls are routed to a long distance carrier that has no established account with the customer.

An LEC must provide an IXC with billing information, together with a reason, whenever it rejects a customer request for presubscribed long distance service. If the rejection occurs because the customer has switched to a different local provider, then the LEC rejecting the switch must provide the IXC with information as to which LEC provides the customer's dial tone. Finally, the LEC must notify the IXC

whenever a customer makes any changes that affect billing, including address changes, name changes, or changes due to slamming complaints.

These rules apply only to traditional land-line carriers in their dealings with LECs. The FCC opened a further proceeding on similar issues involving wireless carriers, as well as the transfer of local lines from one LEC to another. The FCC also seeks public comment on possible procedures for notification by a LEC to an IXC when it suspends or blocks a customer account due to fraud or non-payment of bills.

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*Statistics indicate that nearly 60 percent of LECs and IXCs do not participate in any exchange of customer information. As a result, consumers are frustrated, local carriers get harangued, and long distance companies bill incorrectly.*

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