

FHH Telecom Law

Ultra-Wideband Rules Released

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Two months after adopting rules for ultra-wideband (UWB) operation -- four years after the proceeding commenced -- the FCC finally released its rules to the public. And even then, the proceeding is not yet over.

Like the "spark gap" transmitters that flashed Morse Code among ships in the earliest days of radio, a UWB transmitter spreads its signal across a very wide swath of spectrum -- up to several gigahertz. But UWB works at extremely low levels. The new rules limit the strongest UWB signal at any frequency to the same minuscule level as the maximum radio noise from a personal computer -- power measured in *billionths* of watt. Operation at some frequencies is held to levels thousands of times lower.

Applications include inter-connecting consumer devices, short-range networking, radar imaging, monitoring fluid levels in large storage tanks, and even detecting the presence of a person on the commode.

Even with these flea-powered signals, the first UWB communications devices will operate at 10 times the data speed of existing 802.11b (Wi-Fi) networks, although at only about one-tenth the range. Even so, UWB is expected to find very wide use for interconnecting consumer electronic devices (laptops, Palm-type organizers, digital cameras, etc.), and for short-range networks, especially in the home, connecting TVs, DVD players, and cable and satellite video interfaces. A separate list of radar applications includes imaging into walls, through walls, and underground, and as collision avoidance systems in moving cars. Still other applications include monitoring fluid levels in large storage tanks, and even detecting the presence of a person on the commode to activate a bathroom ventilation system.

Given the evident public benefits and the low propensity for interference, why did the proceeding take so long? A UWB signal occupies so much spectrum that it overlays

both commercial and Government spectrum, and it cannot avoid putting some energy into the sensitive "restricted bands" ordinarily unavailable to radio transmitters. Spectrum users such as GPS, PCS, and DARS feared that widespread adoption of UWB would cause the

accumulation of interference into their frequencies from multiple devices. And some Government users objected as a matter of principle to allowing intentional emissions at any level into the restricted bands. The FCC responded by severely limiting UWB radiation. At some frequencies, UWB devices are held to levels 3,000 times lower than the permitted noise from a PC. The FCC also limited some types of UWB radar devices to public safety agencies, research facilities, and/or mining and construction companies, and has re-

quired some users to coordinate their operations with the Government.

Even after the long wait, the proceeding is not yet over. The FCC has acknowledged that its first try at regulating UWB may be too stringent, and has promised to reexamine the rules soon.



Due dates for filings in FCC proceedings are subject to last-minute change. Please call us for current information.



Public Safety, Private Wireless, and Auction Money

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Allocation of valuable spectrum to new services is usually a complex balancing of competing technical needs with political intrigue. All of these elements -- plus the need to reduce interference to public safety (PS) operations -- intersect with the FCC's proposed rulemakings on the allocation of spectrum at 4.9 GHz, and the reallocation of services in the 800 MHz band.

Even before September 11, the FCC was concerned about whether PS agencies (police, fire, EMS, etc.) had enough interference-free spectrum to meet their needs. September 11 only added political momentum to calls for enhancing PS communications, and allocation of additional spectrum for PS services. In February of this year, the FCC allocated 50 MHz of spectrum at 4940-4990 MHz for fixed and mobile communications by PS agencies. Still pending is a request for comments on licensing and service rules; band segmentation and channeling; technical standards; and the impact of operations on radio astronomy.

The PS community apparently believes that the 4.9 GHz spectrum band will not be enough, in part because those frequencies are not usable by the current 800 MHz PS systems. But the 800 MHz band has its own problems for the PS community. This band is allocated to fixed and mobile private wireless users (PS users, in addition to business dispatch radio services, "specialized mobile radio" or SMR) and commercial services such as cellular radio and Nextel's "enhanced" SMR service. PS users of the 800 MHz band have increasingly complained about interference.

While the reasons for the interference to PS can be complex and variable, the FCC reports substantial evidence that much of the problem is caused by the nearby Nextel channels. In an attempt to make lemonade out of lemons, Nextel proposed a reallocation of 800 MHz spectrum, with PS getting a larger block in the lower portion of 800, and Nextel getting a larger portion of spectrum in the remainder of the 800 MHz band, as well as a chunk of spectrum at 2.1 GHz. The plan is intended to reduce interference by eliminating the interleaving of PS and Nextel channels, adding separation between the portions of the band used by PS and by Nextel, and giving more 800 MHz spectrum to PS. But the solution would require thousands of non-PS, non-Nextel incumbent users in the 800 MHz band either to accept secondary status, or to move to 700 and 900 MHz frequencies currently held by Nextel, at their own expense. Those incumbents object. Although they are not the source of the interference, their move (by Motorola's estimate) would cost them over \$1 billion.

The FCC requests comment on the Nextel proposal, as well as other proposals for reallocating the 800 MHz band. Some parties will likely propose moving PS to newly allocated spectrum in the 700 MHz band, next to previous PS allocations at 764-776 and 794-806 MHz. But the targeted spectrum is currently allocated to broadcast TV, used by many TV stations, and slated for auction on June 19, 2002, pursuant to Congressional mandate. (As we go to press, Congress is considering a bill to postpone the auction.)

In short, any FCC-imposed solution is likely to upset one or more of the numerous stakeholders, who are likely to seek review by a court. Despite the impetus provided by September 11, PS interference will not be resolved soon.

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FCC to Relax Broadband Rules

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A series of recent FCC orders and notices adds up to a "hands-off" approach toward broadband services.

The FCC recently determined that cable modem access to the Internet is not subject to regulation as a standard telecommunications service, but rather as an information service. Selection of the latter category -- based in part on a finding that consumers are paying not for basic raw telecommunications services, but rather for interactive access to the Internet -- affords cable modem service providers greater latitude and fewer regulatory burdens. The FCC seeks further comment regarding cable modem service provider contributions to universal service, subscriber privacy, pole attachments, and application of state and local regulations.

The FCC also opened parallel rulemaking proceedings to determine how to classify DSL wireline

Internet access services, and what regulatory treatment to impose. The initial conclusions reached by the FCC, as well as the general tone of its questions, suggest a desire to deregulate. Indeed, some Commissioners noted that the FCC seemed far from impartial in seeking comment on these issues.

Two other broadband-related proceedings address analyses of current regulations affecting telephone companies, including some that benefit ISPs, as well unbundling requirements for certain telephone company service elements.

Taken together, these proceedings reinforce the FCC's apparent intention to remove itself from involvement with broadband Internet access, in the belief that a free market approach may better serve its policy goals of encouraging ubiquitous availability. Final decisions will not be available for at least several months.



TRS Over the Internet

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A recent FCC Declaratory Ruling permits the recovery of expenses for the cost of providing Telecommunication Relay Services (TRS) over the Internet. The TRS program presently enables hearing- or speech-impaired persons to connect with TRS Call Centers and, with the assistance of TRS call center staff, communicate with third persons utilizing a teletypewriter/text telephone (TTY) device. But the cost of TTY equipment limits the population who can easily use the service. For persons with access to the Internet, the availability of Internet-based TRS offers a cheap alternative to the purchase of TTY equipment.

The declaratory ruling makes the TTY device unnecessary. TRS us-

ers may log onto a website that connects with a TRS Call Center. Once that contact is made, there is little difference between access via a TTY device and a computer. (But the FCC does not explain how a non-impaired person can call an impaired person using Internet-based TRS.)

The FCC noted there are new and different costs associated with making TRS available over the Internet, and held that these costs are eligible for recovery from the Interstate TRS fund. In addition, the FCC sought comment on whether it should attempt to separate Internet TRS services on an intra/interstate basis.

12 GHz Broadband Approved

As part of a long and contentious proceeding, the FCC has affirmed its decision to authorize the Multichannel Video Distribution and Data Service (MVDDS) in the 12.2-12.7 GHz band. The new service is intended to facilitate the delivery of new video and broadband services such as local TV programming and high-speed Internet access. Much of the controversy results from the longtime prior use of this band by the Direct Broadcast Satellite (DBS) service, whose millions of consumer satellite dishes are potentially vulnerable to interference. The FCC adopted technical rules intended to protect DBS, and added a "safety valve" rule permitting individual DBS licensees or distributors to show they need better protection. Licenses will be auctioned using 348 Component Economic Areas.

FCC Facilitates Broadband Satellite Services

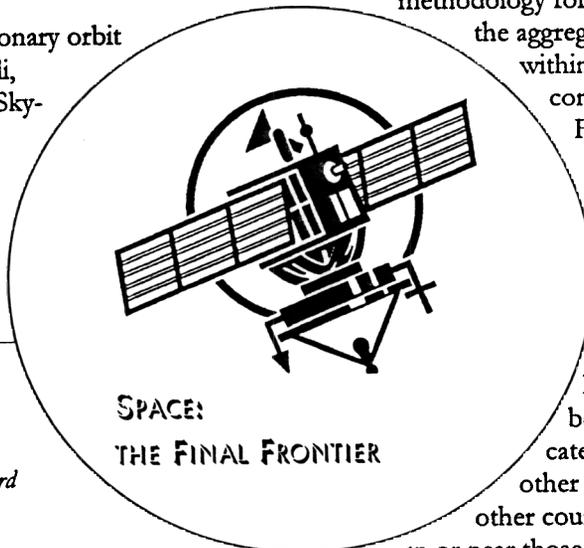
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Newly adopted rules for licensing satellite services in shared Ku-band frequencies (10.7 -14.5 GHz) should help to promote the delivery of broadband services by satellite. The FCC has created a sharing method for systems to operate simultaneously in shared spectrum, even while using different satellite designs.

Seven applicants for nongeostationary orbit satellite systems -- Boeing, Denali, Hughes (2 systems applied for), Skybridge, Teledesic, and Virtual GEO -- will be able to share the same spectrum to provide advanced data, video and telephony services. In order to receive their licenses, the appli-

cants must file amendments to their applications to meet the new sharing standards.

The FCC also adopted a Further Notice of Proposed Rule Making on how to allocate the limit on the total power that can be emitted by the Ku-band NGSO Fixed Satellite Service. The Further Notice proposes a methodology for licensees to demonstrate, in the aggregate, that their systems are within that limit, and also seeks comment on whether the FCC's new definition of inline interference events should be adjusted with respect to higher powered transmitters.



FCC Examines ESV Licensing

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The FCC has launched a proceeding to explore the licensing of ship-board satellite earth stations, usually called earth station vessels (ESVs). Because ESVs operate while in motion, they have the potential to cause interference to Fixed Service point-to-point microwave stations sharing the same frequencies. For that reason the FCC does not presently license ESVs as it does other earth stations, but instead has granted and extended special temporary authorities (STAs). These prohibit ESV operators from causing harmful interference to other stations, and require that the ESV operators cease operations upon notification of interference.

The FCC is now exploring the domestic licensing of ESVs. Issues include (1) the feasibility and wisdom of authorizing ESVs in general, given the need to protect other authorized services in the same bands; (2) the appropriate regulatory status for ESVs, including bands for operation and licensing schemes; (3) methods for dealing with specific interference concerns; and (4) international coordination issues that would result from authorizing ESV operations on a more permanent basis.

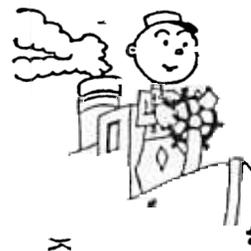
International issues arise because ESVs may be located on ships bearing flags of other countries, and may dock in other countries' ports. ESV service in or near those ports would require bilateral or international frequency coordination in bands shared with terrestrial services. The World Radiocommunication Conference in Istanbul in 2000 (WRC-2000) adopted Resolution 82 "inviting the continued study, as a matter of urgency, of the regulatory, technical, and operational constraints to be applied to ESV operations." The Commission will have to consider these unresolved issues in developing its domestic licensing scheme.

Orbital Debris Cleanup

The FCC has proposed a requirement that all U.S. licensed satellite systems submit plans to mitigate orbital debris -- *i.e.*, artificial objects orbiting the earth that are not functional spacecraft. The continuing increase in orbital debris raises concerns about the reliability and cost of space activities, including satellite communications.

Changes to Maritime Regulations

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Among other changes, the FCC converted the licensing structure for Automated Maritime Telecommunications Systems to a market based system, allowing a single applicant to acquire both allocated spectrum blocks. In addition, the FCC extended the fishing-vessel exemption from the global maritime distress and safety system (GMDSS), although it did not make the exemption more widely available to other vessels. The FCC also created a restricted

In view of the complexity of these orders, we encourage readers interested in specific issues to contact us for further information.

FCC Considers Uniform Complaint Process

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The FCC has proposed new rules that would create a single, uniform process for filing informal complaints against all FCC-regulated entities, including MDS licensees, cable franchisees, and unlicensed service providers.

The proposed rules are based on the informal complaint procedures already in place for common carriers. That process starts with the consumer/complainant providing information relating to the complaint, including its specific cause and the relief requested. Once the FCC has ensured that it has jurisdiction over the substance, it provides a copy of the complaint to the licensee, and requires a response within a specified time. Most common carrier complaints are resolved through private settlement between the parties. If the complaint is not addressed to the satisfaction of the consumer and the FCC staff, then a formal complaint may be filed.

While the Consumer and Governmental Affairs Bureau ordinarily administers the process, the Enforcement Bureau may step in if the complaint raises possible violations of the Communications Act or the Commission's rules.

The new procedures may cause problems for licensees who have not previously been subject to a process like

the one proposed here. The tight turn-around on times for replies to complaints, along with the pressure on the provider to disprove the complaint or reach settlement, could impose substantial burdens. Moreover, the new procedures, would add to -- not replace -- any other informal complaint procedures already in place.

SBC COMMUNICATIONS FINED

The FCC has fined SBC, the local telephone company in 13 states, \$100,000 for failing to submit a sworn statement attesting to representations it made to the FCC. As part of an inquiry into SBC's activities regarding DSL service, the FCC posed specific questions to SBC and required not only answers, but also a sworn statement attesting to their accuracy. SBC submitted the answers, but balked at the sworn statement. After legal arguments, SBC ultimately complied, but the FCC imposed a \$100,000 fine.

In another matter involving SBC, the FCC imposed an \$84,000 fine for two dozen violations of the collocation rules.

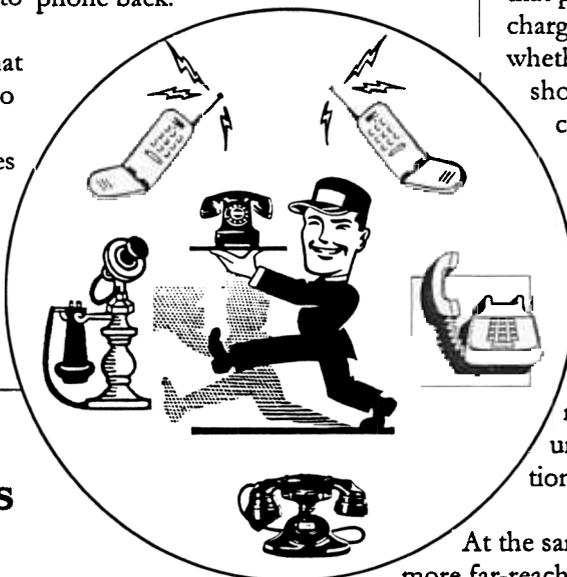
Wireless 911 calls, with some strings attached

FCC Makes Call on Non-Initialized Phones

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The FCC's 1997 order requiring the wireless carriers to accept 911 calls from all wireless phones - including phones that are not signed up for service - caused an unexpected problem. Many such units, generally called "non-initialized" phones, are sold as "911 only" phones, and others are orphaned when a subscriber's service is cut off. Still others are cast-offs donated to at-need individuals, such as victims of domestic violence, the elderly, and the infirm. In order to make emergency help available as widely as possible, the FCC insists that even non-initialized phones be able to call 911. Not being listed in any carrier's database, however, these phones have no phone number associated with them. If the call drops or the caller hangs up, the public safety answering point (PSAP) -- *i.e.*, the 911 desk -- cannot call back.

The FCC finds that the inability to return calls to a 911 caller may impede an effective emergency response. But it cannot find a technical solution to the problem. Instead, it will require labeling of 911-only and carrier-donated phones to alert the end user that call-backs are not possible. In addition, these phones must identify themselves to the PSAP with "phone number" 123-456-7890, as a warning to the PSAP that it cannot call the phone back.



Universal Service Fund Contributions

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The FCC recently tweaked its universal service fund contribution rules to raise the contribution threshold for companies that provide primarily international telecommunications services. Most telecommunications providers must contribute 5 - 7% of their gross revenues to this fund. Though some have argued that international revenues should not be considered at all in the gross revenue equation, the FCC has ruled that carriers who derive 12% or less of their revenue from interstate revenue (with the rest being international) will be assessed a USF contribution, but only on their interstate revenue. The FCC also acted to permit consolidated filing of the USF report by affiliated entities, and clarified that USF contributions

Take Your PIC

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A local telephone company cannot charge more than \$5 to change your PIC (presubscribed interexchange carrier) without a special explanation. Interexchange carriers have complained for years that \$5 per PIC change is too high, given the automation that has replaced the original labor-intensive process, and adds unnecessary transaction costs to changing interexchange carriers. The FCC has initiated a proceeding to determine whether that presumptively reasonable \$5 charge should be reduced, whether local exchange carriers should have to justify their charges for this service in tariffs, or whether the whole matter should just be left to market forces.

must not be counted in determining the gross revenue figure on which the USF contribution is based.

At the same time, the FCC initiated a more far-reaching inquiry into the basis on which USF fees are collected. It proposed to calculate the fees on the number of connections to the public network (at \$1 per connection for residential customers) rather than on gross revenues. It also asked for comment on whether carriers should be prohibited from recovering amounts in excess of their actual USF contributions from customers (such as administrative costs and uncollectibles) as part of their line item charge. Finally, the FCC is looking into requiring that carriers designate any line item charges to customers for USF in a uniformly consistent and non-discriminatory way, so that customers know what they're paying for.

Factsheet Outlines Rules for Towers and Historic Sites

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Licensees who locate on new towers near historic sites may face greater scrutiny under terms of an agreement reached early last year and clarified in a recent FCC factsheet.

The proliferation of wireless towers originally drew the ire of the National Conference of State Historic Preservation Officers (NCSHPO). Together with the Advisory Council on Historic Preservation (ACHP), NCSHPO drafted an agreement with the FCC to protect historic sites from encroaching towers.

The March 16, 2001, agreement encourages collocation on existing towers, buildings, and other structures, striving to protect historic properties in part by reducing the need for new towers. The FCC factsheet clarifies that the agreement covers both wireless communications facilities and the licensees that often collocate on those towers.

Both wireless and broadcast licensees may face serious sanctions, such as fines, if they locate on a recently built structure that does not adhere to the agreement.

The agreement requires Commission licensees and applicants to comply with National Historic Preservation Act (NHPA) procedures for facilities that may affect sites that are listed or eligible for listing in the National Register of Historic Places. If a licensee has equipment on a tower, building, or other structure constructed on or before March 16, 2001, the licensee likely falls under the agreement's grandfathering clause and won't need new review under the NHPA, except under enumerated special circumstances. But a licensee on a tower, building, or structure built after March 16, 2001, must ensure that the tower has passed muster under the NHPA, and have the documentation to prove it. Collocation on a new tower will still require review under any of several circumstances: the NHPA analysis is not yet complete; the FCC has determined that the collocation has a continuing ad-

verse effect on a historic property; a complaint against the collocation's impact on a historic property is before the FCC; or the collocation will result in a substantial increase in the size of the tower.

A licensee locating on a tower built after March 16, 2001, that has not undergone historic review may face sanctions. To avoid such a fate, the licensee should check with the State Historic Preservation Officer before building a tower or locating on an existing tower or structure.

"The agreement requires Commission licensees and applicants to comply with National Historic Preservation Act (NHPA) procedures for facilities that may affect sites that are listed or eligible for listing in the National Register of Historic Places."

In the past, independent reviews of how collocation impacts historic sites by the FCC, ACHP, and NCSHPO have often resulting in long construction delays. The agreement is intended to streamline that process among federal agencies. The factsheet, in turn, is intended to provide guidance to

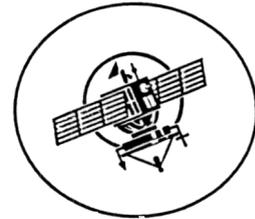
licensees on how to satisfy NHPS requirements and speed review of requests to collocate on new towers. Additionally, the ACHP has organized a telecom working group to streamline historic preservation siting requirements and create a model that individual states can use to speed their own reviews.

Carriers Violate Tariffs for Directory Assistance

The FCC held that MCI and AT&T have violated their tariffs for directory assistance. Although the tariffs supposedly permit a caller to obtain two phone numbers in the same call, for the same charge, the computerized voice prompts handling the call gave out only one number, without making it possible for the caller to request a second listing. The FCC found the practice to be unjust and unreasonable under the Communications Act. But it did not set a penalty. Relief will be up to the federal district courts, which had referred the question to the FCC as part of a class action lawsuit.

Reform of Satellite Licensing Procedures

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Responding to increased global competition, the FCC proposes to reform its satellite licensing process to expedite delivery of satellite services to the public. Many applications involve requests to operate satellite systems in the same frequency bands, which creates the potential for mutual interference. The FCC currently allows applicants to negotiate solutions to accommodate all proposed systems, but the negotiations often delay licensing by months or years.

The FCC has now proposed two alternative space station licensing proposals. One would eliminate processing rounds with a new "first come, first served" approach, under which the FCC would consider the first application for specific spectrum and/or orbit location, and process later-filed applications according to their filing dates. The second proposal would simply modify the existing procedures to require that negotiations be completed within 60 days. The FCC has also proposed other satellite licensing initiatives, including elimination of financial qualifications, strengthening the milestone requirements, eliminating the anti-trafficking rule, and streamlining the replacement satellite application procedure.