



At long last . . .

AWS-3 Takes Center Stage

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At its March 31 meeting, the FCC made available an additional 65 MHz of spectrum for broadband operations – sort of. This much anticipated action fulfills part of the objective of the National Broadband Plan to deliver 500 MHz of new spectrum for broadband, while also meeting the requirement of the Middle Class Tax Relief and Job Creation Act of 2012 to find and license 55 MHz of spectrum within certain designated bands by February, 2015. This required taking some spectrum from notoriously possessive Federal government users and figuring out which spectrum bands could most quickly and easily be re-purposed. Amazingly, the [Commission’s decision](#) seems to have left most prospective licensees reasonably happy, while not accommodating everyone completely – usually the sign of a fair decision. The adoption of these service rules, with the February, 2015 statutory deadline looming, sets the stage for an auction of the new spectrum in the fall of this year.

Before we get to the provisos and complications, take a look at the graphic representation of new spectrum plan’s main specifics (on page 14).

The band plan first establishes two curiously unpaired licenses in the 1695 - 1710 MHz band, one 5 MHz in size and the other 10 MHz, both to be offered on an Economic Area (EA) basis. The FCC’s preference had been to pair this band with some other suitable spectrum, but despite suggestions from several parties, it could not locate a mate for this spectrum. The licenses are designated for mobile/uplink only, which means the buyer of this spectrum will have to have some other independent source for downlink.

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In the wake of Verizon

FCC Requests Ideas for New Net Neutrality Effort

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You have to feel sorry for the FCC, trying to write net neutrality rules despite a court order that pretty much rules out “neutrality.”

A month after the [D.C. Circuit rejected the FCC’s approach to net neutrality](#), the [FCC announced it will not appeal](#) that decision. While three of the commissioners remain determined to craft some type of net neutrality constraints, the FCC has put out a curious announcement that sheds no light on what, if any, alternatives it may have in mind to address a problem the court just made a lot more difficult.

The sad part, though, is that the FCC’s dilemma is entirely self-imposed.

Back in the dial-up days, the FCC distinguished between **transporting** Internet content and **providing** that content. It regulated the transport component of Internet service as common carriage, while leaving the provision and processing of content unregulated.

With the advent of broadband, the FCC made a key change. It decided to treat the transport and provision components together as a single service, and deregulated all of it. Those rulings relinquished its common carrier authority over the transport component, a step that led directly to the [D.C. Circuit’s striking down the FCC’s net neutrality rules](#).

To be sure, the court agreed with the FCC that Section 706 of the Communications Act, while on its face merely telling the FCC to “encourage” broadband deployment, nonetheless provides “affirmative authority” to impose “rules governing broad-

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And then there were four. . .

FCC Approves AT&T's Acquisition of Leap Wireless

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The [FCC took another giant step toward reconstitution of the old Ma Bell monopoly](#) by approving AT&T's acquisition of Leap Wireless, which operates nationally under the Cricket brand. Leap was the fifth largest facilities-based wireless carrier in the U.S., so it was surprising that the proposal for it to become part of the second largest carrier elicited so little opposition from anti-trust regulators, the public interest community, or even the remaining smaller competing carriers. The proposal got little more than a shrug from the 8th floor of the FCC, which chose to let the matter be resolved by the Chief of the Wireless Bureau rather than having the commissioners themselves consider the matter. This lack of high level interest was especially curious given the strong signals from federal regulators that any move by Sprint to acquire T-Mobile (number three buying number four) would be looked at with extreme disfavor. How come number two buying number five didn't even merit a glance?

The transfer of control applications did generate oppositions from Public Knowledge and several entities with idiosyncratic grievances against AT&T. (Full disclosure: the author of this article represented two entities that opposed or sought conditions to be placed on the transaction.) The pleadings and counter-pleadings which were volleyed back and forth for six months took a comical turn at one point. Leap, which vigorously opposed AT&T's acquisition of T-Mobile a couple of years ago on the grounds that AT&T was refusing to offer reasonable roaming rates to other carriers, suddenly fell silent on this point when the same charges were leveled here. In addition, Leap, which had repeatedly characterized itself as a nationwide carrier in its SEC filings, its FCC filings, and its advertising, suddenly disavowed that status. It also claimed not to compete with AT&T, despite giant billboards all around the country proclaiming how Cricket's service is less expensive than AT&T's. For its part, AT&T, which had earlier solemnly pointed to Leap as a disruptive and vigorous competitor which elicited competitive responses from AT&T, did a perfect about-face and equally solemnly declared that Cricket was a competitive non-factor that did not affect AT&T's sales strategies at all. Clearly, mergers make strange bedfellows. And the FCC good-naturedly shrugged off all the previous representations of the two parties as though they had never been worthy of credence anyway.

The staff did examine carefully the red flags that had been raised by both the high spectrum aggregation and the high market share concentration which resulted when Leap's spectrum and customer base were added to AT&T's. To handle the spectrum issue, the FCC required AT&T to divest itself of 10 MHz of AWS (or other spectrum designated by AT&T) in about 15 markets. The market concentration issues in a number of markets were enough to give the FCC some serious heartburn, but this was easily relieved by a bicarbonate of LTE: AT&T simply agreed to roll out some additional LTE in the most egregious markets, and the FCC said that benefit made up for the diminution in competition. Promising to roll out LTE has become the palliative of choice for large carriers who must somehow overcome what would otherwise be debilitating negatives caused by their proposed transactions. The instructions for this particular nostrum call for it to be administered at the very last minute in the agency's deliberative process, thus precluding any interested member of the public from commenting meaningfully on whether the alleged benefits really exist and, if so, whether they really outweigh the harms.

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FCC Proposes Expanding Text-to-911 Mandate to All Text Service Providers

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Pity the poor FCC. Saddled with an outdated governing statute and limited resources, it's supposed to regulate newly-minted whiz-bang technologies that get embraced by the public seemingly before the FCC even learns about them. And when it tries to get ahead of the curve, it occasionally gets *too* far ahead. Case in point: its text-to-911 bounce-back rule for roaming customers. A great idea on paper but, as the FCC learned, beyond the capabilities of existing technology, [the result being a last-minute revision to the rule last September](#).

Bloodied but unbowed, the FCC is again revising its text-to-911 rules in an apparent attempt to catch up with that “app” thing that all the kids are using. In a [Policy Statement and Second Further Notice of Proposed Rulemaking](#) (PS/SFNPRM) the Commission is proposing to require all interconnected text messaging services to enable consumers to send text messages to 911. This would include texting apps that ride “over the top” (OTT) of the data services of wireless service providers.

But this time, even the FCC recognizes that its ambitions may exceed present-day technical capabilities.

More than a year ago the Big Four wireless carriers (Verizon, AT&T, Sprint, and T-Mobile) agreed that, by May 15, 2014, they would provide text-to-911 service to Public Safety Answering Points (PSAPs) that are capable of, and that request to receive, such service. With text-to-911 capabilities for the Big Guys now just a couple of months away, the FCC has decided as a matter of policy that every CMRS carrier *and* every provider that enables interconnected texting should do this as well.

How and when that might happen is unclear.

In the Notice of Proposed Rulemaking portion of the PS/SFNPRM, the FCC requests comments on a wide variety of questions that will have to be answered before its newly-announced policy can be implemented. While most of the technical issues appear easy to resolve – if they haven't been resolved already – as far as non-Big Four CMRS operators are concerned, the same isn't true of interconnected OTT services. Their technical ability to meet text-to-911 requirements is a Commission concern. So too are problems involving: the capability of providing Phase II-

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From 2-D to 4-D

E911 to Come in From the Cold

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Since 2010 [the FCC has been insisting on greater accuracy](#) in the ability of wireless providers to pinpoint the location of wireless phones for E911 purposes. The [automatic location information \(ALI\) rules currently in place](#) require that carriers be able to provide Public Safety Answering Points (PSAPs) the location of an E911 caller to within 50 to 300 meters (depending on the technology used). But that requirement applies only to calls originating *outdoors*, and it mandates provision of only horizontal locations determined by geographic coordinates (*i.e.*, latitude and longitude).

Nowadays, however, wireless phones are the source of most 911 calls, and the “great majority” of wireless calls originate indoors – hence the need for improved *indoor* E911 location capability.

Fortunately, test bed results and industry input confirm that indoor location technologies have improved considerably, so much so that they are expected to “deliver 50-meter location accuracy for many indoor environments with a high degree of reliability” in the near term. With [its Third Further Notice of Proposed Rulemaking](#) (NPRM) the FCC is now looking to ensure that the wireless-dependent public benefits from that capability.

But locating E911 callers inside buildings poses an additional question: how are first responders supposed to find the caller-in-distress when the geographic coordinates identified by the carrier turn out to be the site of a multi-story building?

No problem. The various fancy gadgets that can be built into smartphones include barometric sensors. According to [a source cited by the FCC](#), as of 2013 all of Samsung's “flagship smartphone models” had such sensors on board, as did a couple of Sony models. Apple was expected to join the club in 2014. Because (a) barometers measure air pressure and (b) air pressure varies according to elevation, such sensors can provide vertical location information (the “z-axis”) to supplement the horizontal (“x-axis” and “y-axis”) information already available.

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Coming soon (maybe): Connect America funding

FCC Seeking Proposals for Rural Broadband Experiments

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The FCC is looking for proposals to bring advanced telecommunications services to rural Americans . . . and it's planning on providing governmental cash to worthy proponents. To help it determine what projects will get funded and how much funding will be available, the Commission has launched a two-phase process. First, prospective proponents have been invited to submit "expressions of interest" describing what they have in mind. In the second stage, the FCC will seek more detailed and definite applications, subject to resolution of certain policy issues in the Further Notice of Proposed Rulemaking (FNPRM) component of the [Technology Transition Order](#). Reply Comments on the FNPRM are due no later than April 14.

The Commission's invitation is addressed to the widest range of communications service providers, including ILECs, CLECs, cable, utilities, fixed and mobile wireless, municipalities, Tribes, WISPs, and others. So if you're interested in building high-speed, scalable IP-based networks in rural areas and maybe getting at least some federal funding in the process, listen up.

In its call for proposals, the FCC is focusing on proposals to build robust **last-mile** broadband, rather than middle-mile projects. Proposed experiments described in expressions of interest must be for rural areas currently lacking Internet access service that delivers at least 3 Mbps downstream/768 kbps upstream.

The major goal here is to determine how the use of "tailored economic incentives" might encourage the deployment of next gen networks, wireline and wireless, in rural, high cost areas to which such networks have historically been slow to spread. In the FCC's words, the experiment will "test, on a limited scale, the use of an application-based competitive bidding process with objective selection criteria".

The Commission is currently considering what mechanism(s) to use in the award of Connect America funding support in price cap territories where the incumbent declines the offer of model-based support. One possibility would be for the FCC to use *application-based* competitive bidding, rather than a reverse auction. Another

innovation: while such funding has previously been available only in areas served by price cap incumbent local exchange carriers, in this program it will also be made available in areas where the incumbent is a rate-of-return carrier.

How much money will ultimately be on the line? Because it is in the earliest stages of launching this experimental process, the Commission is vague on that point. It does say that it anticipates only a "limited" number of Connect America funded experiments, with total Connect America support of perhaps \$50-100 million. Applicants could propose either a one-time allocation of support or on-going annual support for up to ten years.

By dangling the possibility of Connect America funding, the FCC hopes to get answers to the following questions:

- ? Under what conditions will consumers or providers prefer next generation wireless services over wireline alternatives?
- ? What are the viable business models that could support the deployment of fiber or other next generation wired technology in rural areas?
- ? What is the interest among non-incumbents to provide rural high speed IP-based networks?

As noted, the FCC contemplates a two-stage process for determining how to dole out this funding. Before the second "formal proposal" phase, the initial "expression of interest" phase will provide the Commission with at least a sense of what types of proposals it might expect at the formal proposal stage. In the initial stage which has now commenced, interested parties may file non-binding "expressions of interest". Such proposals must be filed electronically (go to [the FCC's ECFS filing site](#) and upload in Proceeding Number 10-90). While an initial deadline of March 7, 2014 was announced for such expressions, the Commission has made clear that expressions of interest may still be filed on a "rolling basis" thereafter. At this point, hundreds of filings have been made.

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The FCC is focusing on proposals to build robust last-mile broadband.



(Rural Broadband Experiments - Continued from page 4)

Information to be included in an expression of interest should include:

- ✓ The nature of the submitting entity or entities (*e.g.*, incumbent LEC, municipality, utility, cable operator, wireless provider);
- ✓ Identification of the proposed service area for the experiment, including census block number, with any relevant information regarding the number of locations that could be served, including schools, libraries, and other anchor institutions;
- ✓ The broadband technology or technologies to be deployed;
- ✓ Contemplated service offerings (*e.g.*, description of voice service, broadband speed tiers, nature of video service, if any) and pricing of such offerings;
- ✓ If known, expected State and/or local or Tribal governmental participation in and/or support for the project (*e.g.*, expedited permitting, access to rights of way, matching funds, etc.); and
- ✓ Whether the proposal is expected to require one-time or continuing funding and a high-level estimate of the amount of funding requested.

A number of issues must be resolved before "formal proposals" will be accepted.

Applicants must already be designated as an "eligible telecommunications carrier" for purposes of receiving support, or must obtain that designation once their application is selected.

In designing their proposals, prospective applicants should consider the geographic areas that will be eligible for support. Those areas must currently lack any broadband service. (It is likely that the final application process will include an opportunity to challenge an applicant's claim that particular areas are unserved.)

Applicants will also have to consider the size of the proposed service area.

In price cap ILEC areas, proposals will be considered at the census tract level, although funding will be provided only for locations in eligible census *blocks* with any census *tract* covered by the proposal. A census block will be eligible if (a) it lacks broadband and (b) the "average cost per location is equal to or exceeds the likely funding threshold in the forward-looking

cost model". (The Commission advises that its work on developing the "forward-looking cost model" to be used in this context is "nearing completion".)

In rate-of-return service areas, proposals will be considered at the census *block* (rather than the census *tract*) level.

Shortly after announcing the experimental process, the [FCC released a list of the census tracts](#) in price cap areas potentially available for the rural broadband experiments. (Note: Clicking on the link will provide access to a comma-separated-values – "csv" – file that can be opened with Excel or other spreadsheet software.)

The submission of an expression of interest is **not** a pre-condition for submitting a formal proposal when the second phase of the process begins. This two-step approach is expected to help the FCC to plan in advance for how much funding they need to set aside when the second, "formal proposal", stage arrives.

While first phase "expressions of interest" may be filed now, a number of issues must be resolved before the second phase "formal proposals" will be accepted and considered. In the FNPRM component of the [Technology Transition Order](#) the FCC is seeking comments on those issues. With respect to the criteria to be used in evaluating formal proposals, the Commission asks:

- ? If cost effectiveness is a criterion, how should it be measured?
- ? How should "robust, scalable networks" be defined?
- ? What should the minimum throughput speed be for the funded networks: 4 Mbps downstream/1 Mbps upstream; 6 Mbps down/1.5 Mbps up?
- ? Should applicants be required to leverage other funding – from states, localities, or Tribes?

Comments are also sought on:

- ? whether an application-based competitive bidding system (as opposed to a reverse auction) should be used to select proposals to be funded;
- ? the amount of Connect America funding that should be made available; and
- ? whether an initial window should be opened for

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(Net Neutrality - Continued from page 1)

band providers' treatment of Internet traffic.”

But the court balked at the non-discrimination provisions the FCC had written into its rules. Non-discrimination, said the court, is a hallmark of common carrier regulation. The FCC cannot impose such rules on companies it has specifically declared not to be common carriers.

The FCC said it will not appeal this ruling; instead it will try to craft new net neutrality rules that comport with the court's decision. To do that, it will have to find language that imposes a non-discrimination requirement on Internet service providers (ISPs) while still avoiding the non-discrimination wording that characterizes common carrier rules. Since the potential discrimination by ISPs that concerns the FCC is almost the same behavior as is barred to common carriers, we don't see how the FCC expects to pull off this linguistic feat.

The two Republicans on the five-member Commission are opposed to the rewrite attempt, preferring to leave the broadband ISPs unregulated.

The FCC has another option: it can “reclassify” the transport component broadband of ISP service as common carriage. The legal obstacles are probably surmountable, but the political barriers may be higher. Successive FCC chairmen have ruled out the possibility – although the current Chairman Wheeler recently [backed off somewhat from this commitment](#), reminding us that the Commission still has the authority to reclassify Internet service if warranted. Yet that authority comes from Congress, where some have warned that they will step in to overrule the FCC if it tries to reclassify. We expect the anti-

It is noteworthy that the FCC declined to suggest a preferred course.

reclassification forces will have support from the telephone and cable companies who serve most of the country's broadband Internet users and who prompted deregulation in the first place.

Having stared at this problem for several years, the FCC is surely familiar with its available options. It is thus noteworthy that the FCC declined to suggest a preferred course (through the issuance of a Notice of Proposed Rulemaking) or even to lay out the known options (through a Notice of Inquiry). Rather, it has essentially shrugged in bewildered puzzlement and [opened up the call-in lines](#) to anybody anywhere who might have some thoughts, any thoughts, on the matter. After briefly summarizing the history of net neutrality to date, the FCC announces:

[W]e establish a new docket in which to consider the court's decision and what actions the Commission should take, consistent with our authority under section 706 and all other available sources of Commission authority, in light of the court's decision.

We welcome comments from interested parties.

This total lack of direction might suggest that the FCC is adrift in a rudderless boat with no compass and only the D.C. Circuit's decision as a very rough map. Or possibly the very smart people who work there have something up their sleeve they are not ready to disclose.

You can make the reclassification dispute unnecessary and help guide the FCC to safer waters by telling it how to write network neutrality rules that accord with the recent court decision. [Read the public notice](#); then [browse to this link](#) and enter your suggestions in Proceeding Number 14-28.



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proposals by rate of return ILECs.

While initial comments in response to the FNPRM have already been filed, reply comments may be filed by **April 14**.

The FCC's invitation for proposals presents significant opportunities for entities that participate in the rural broadband experiments. Participants may discover important facts about the transition process in their service area. At a minimum, they will at least have a voice in the fact-finding process that will underlie the ultimate criteria to be used. Indeed, parties filing non-binding “expressions of

interest” may shape the transition in their area by putting some “facts on the ground” that may be difficult for the FCC to ignore. Lastly, of course, a successful “formal proposal” could lead to additional Connect America funding to facilitate the transition in their service area.

It's time for interested companies – those that may be interested in proposing rural broadband experiments and those that just want to shape the application process – to get busy preparing either expressions of interest and/or comments in response to the FNPRM. We here at Fletcher Heald are well positioned to assist you. Feel free to contact us.



Shared use of 2473-2483.5 MHz band?

Out for Comment: Globalstar Proposal to Expand ATC Operation

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Last November, at the urging of Globalstar, Inc., the [FCC proposed to modify the Ancillary Terrestrial Component](#) (ATC) of the rules governing the Mobile-Satellite Service (MSS) system operating in the Big Low-Earth Orbit (LEO) S band. Now, after an inexplicable three-month delay, that proposal has [made it into the Federal Register](#), so comment and reply comment deadlines have been set.

Globalstar is the licensee of a Big LEO S band MSS system. It proposes ATC use of its licensed 2483.5-2495 MHz spectrum for a low power broadband network. That is not especially controversial because use of satellite spectrum for ATC service has been approved by the FCC for more than a decade as a way of expanding the use of satellite spectrum for terrestrial communications while maintaining the primary usage for satellite service.

The quirk in Globalstar's proposal is that it would incorporate the adjacent 2473-2483.5 MHz segment of the 2.4 GHz unlicensed band into its operation. While the 2.4 GHz unlicensed band as a whole is widely used for Wi-Fi and Bluetooth, this particular segment at the upper end is unused by standard Wi-Fi operations in the U.S. because of the need to protect Globalstar's adjacent satellite operations. Globalstar figured it could appropriate, in a practical sense, that 11.5 MHz in order to give it an effective full 22 MHz of bandwidth for its terrestrial operations.

But there are some complications.

First, the FCC proposes to relieve Globalstar of some of the so-called "gating" requirements that have acted to limit the usefulness of satellite spectrum for terrestrial operations. Specifically, Globalstar would not have to provide dual-mode handsets capable of communicating with both the MSS network and the ATC. The requirement to have such handsets has been a major obstacle in developing a workable business plan since the satellite component adds considerably to the cost of the device and isn't needed by the normal terrestrial

customer. While Globalstar must maintain its status as a primarily satellite operation, the FCC indicated that that obligation could be met by virtue of Globalstar's considerable satellite operations without the need for extensive additional showings.

(Interestingly, the approach taken by the FCC toward Globalstar differs from the more expansive approach toward DISH Network and its ATC authorizations.

The FCC relieved DISH of *any* obligation to continue providing satellite service at all. To get to that result, the FCC changed the regulatory regime for the DISH spectrum from Part 25 of the FCC Regulations (satellite operations) to Part 27 (normal terrestrial wireless operations). DISH was also relieved of all gating requirements, permitting it to use its spectrum in all respects as terrestrial – a much higher value use. By contrast, the FCC rejected Globalstar's request for Part 27 treatment akin to DISH's and instead chained Globalstar firmly to its Part 25 satellite status. That disparate treatment is curious in view of the National Broadband Plan's policy directive to maximize use of satellite spectrum for terrestrial purposes.)

Second, Globalstar's proposed use of the unlicensed spectrum has been viewed with alarm by other users of that band, particularly the Bluetooth community. It turns out that, precisely because the 2973-2983.5 band is not used for Wi-Fi, it is much more available, and more widely used, for Bluetooth connectivity. Bluetooth manufacturers and users are concerned that the Globalstar's use would adversely affect their own operations. According to Globalstar, because of the frequency-hopping characteristic of Bluetooth operation, there would be no adverse effects. This is one of the most important issues the FCC will have to sort out, with the results of tests conducted by Globalstar figuring in the analysis.

Third, the Broadcast Auxiliary Service (BAS) is a long time user of the same 2483.5-2495 band licensed to

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The approach taken by the FCC toward Globalstar differs from the more expansive approach toward DISH.



A 97-pound weakling no more

Wi-Fi Bulks Up

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We hear a lot about the [shortage of spectrum](#) that wireless carriers need for delivering [silly cat videos](#) to our smartphones and tablets. Also in short supply, although it gets less attention, is spectrum used by “unlicensed” services like Wi-Fi and Bluetooth. Access to this spectrum is free: no multi-billion-dollar auctions. The chips that use it are inexpensive, despite sometimes being housed in pricey tablets. There are no monthly charges. These frequency bands carry far more data every day than do carrier-provided 3G and 4G data services.

Older forms of Wi-Fi used only a band at 5.8 GHz band or, much more commonly, a band at 2.4 GHz. Some newer Wi-Fi protocols can use either or both, or other sub-bands in the 5 GHz range – whatever gives the best performance at a particular time and place. These technologies are amazingly good at working around interference, but still, can tolerate only so much congestion. A [mathematical theorem](#) sets the limit. As more of our devices send and receive more data, everybody’s performance gets worse.

A recent [FCC order](#) will help.

The oddly-named [Unlicensed National Information Infrastructure](#) (U-NII) section of the FCC rulebook governs four separate sub-bands, subject to differing technical rules, between 5.15 and (now) 5.85 GHz. The sub-bands are not fully contiguous, consisting of two contiguous pairs with a gap in between. A [Notice of Proposed Rulemaking](#) back in February 2013 suggested making the rules more uniform, filling in the missing gap, adding another sub-band at the top end, and reconciling inconsistencies with another rule covering some of the same frequencies. It also proposed to address problems of interference from some U-NII devices to airport weather radars.

The new order takes on some of these tasks, while leaving the addition of new bands for another day.

Most significant is an overhaul of the 5.15-5.25 GHz segment. Although this 100 MHz stretch is bigger than the main Wi-Fi band, operation within it has long been the 97-pound weakling of U-NII, limited to a paltry 50 milliwatts of transmitter power and restricted to indoor use. These constraints served to protect satellites receiving uplink signals on the same frequencies. But the FCC decided it could adequately protect the satellites even if it dropped the indoor-only requirement, raised the transmitter power limit 20-fold to a full one watt, and allowed antennas that can focus the power to an effective four watts. (More precisely, four watts is

Operation within the 5.15-5.25 GHz segment has long been the 97-pound weakling of U-NII.

the maximum “effective isotropic radiated power,” or EIRP – a product of both the transmitter power and the antenna focus.) The new rules protect the satellites overhead by keeping signals close to the ground: outdoor, full-power operation is limited to fixed U-NII devices at angles

below 30 degrees above the horizontal. At elevation angles above 30 degrees, where the signal might more plausibly be aimed toward a satellite, the EIRP cannot exceed 125 milliwatts.

The satellite licensee in the band remained concerned that large deployments of U-NII devices could still disrupt its operations. Interference from unlicensed devices, although rare, can be difficult to track down. Once the FCC certifies an unlicensed device as eligible for sale, it has no clue how many units are in operation or where they are. For this band, however, the FCC adopted an unusual rule: before deploying an aggregate of 1,000 access points, the company responsible must file a letter with the FCC acknowledging that it has to take corrective action if its devices cause interference. The names and address of companies filing these letters will at least give the FCC a starting point for investigation if interference does arise.

The uppermost U-NII sub-band, at 5.725-5.825

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GHz, is where the big boys operate, allowed a full one watt of transmitter power and, with narrowly focused antennas, up to 200 watts EIRP. A different FCC rule regulated unlicensed “digital modulation” devices on almost the same frequencies – just a little wider, at 5.725-5.85 GHz. At one time the predecessor digital modulation rules and U-NII rules had significant differences, giving engineers good reasons for designing equipment to comply with one or the other. But over the years the two have gradually converged, to the point where almost-identical rules for almost-identical bands no longer make any sense. The FCC has now taken 5.725-5.85 GHz out of the digital modulation rules (two other bands remain), expanded the U-NII rules to the full 5.725-5.85 GHz, and tweaked the technical details to incorporate the best of both prior rule sections.

The most debated element of the consolidation concerned a digital modulation rule that allowed one watt of power into any antenna, no matter how narrowly focused, with no limit on the resulting EIRP. This allowed a well-designed system to cover several tens of miles in one hop: Wireless Internet service providers (WISPs) could bring the Internet to far-flung rural subscribers; oil companies could communicate with distant offshore oil platforms; wireless telephone companies could set up easy connections between network facilities and cell towers. All of these parties, and more, protested the FCC’s proposal to retain the U-NII limit of 200 watts EIRP. The FCC must have heard them, for the final package still has the former digital modulation rule permitting unlimited EIRP from a one-watt transmitter.

The biggest single problem in the U-NII band overall has been interference into the radars used at many airports to alert pilots to dangerous wind conditions. These Terminal Doppler Weather Radars (TDWRs) operate at 5.6-5.65 GHz, which is also part of a U-NII sub-band limited to 250 milliwatts transmitter power and one watt EIRP. A device in this sub-band (and one other) must “listen” for radar signals, and if hears them, switch to a frequency without those signals – a technology called

“dynamic frequency selection” (DFS). After some fiddling with the details, DFS now works pretty well at protecting the radars.

Then why is there interference?

Many other countries besides the United States have U-NII-like services, but the precise frequency bands, power limits, etc. vary around the world. Rather than make different hardware separately designed to meet each country’s separate requirements, manufacturers prefer to make a single generic hardware radio capable of covering all bands globally, with software controls to maintain compliance with each separate country’s standards. Thus, a radio sold in the United States comes with software installed that keeps operation within U.S. specifications, activates DFS in bands that require it, and so on. But unscrupulous vendors sometimes modify the software to

change the frequency, increase the power, or disable the DFS. The result is a noncompliant radio that might cover greater distances, but can cause interference to the radars. The FCC has uncovered several such instances, most recently [this one](#).

The FCC promises guidance on what types of security measures work effectively.

The new rules require manufacturers to “take steps to prevent unauthorized software changes” that could take the radio out of compliance. (“Prevent” may be too strong a word; no system can be completely hack-proof.) Manufacturers can implement security any way they want – the FCC suggests a few methods, but does not prescribe any – and have to explain their approach in the certification application. The FCC promises guidance on what types of security measures work effectively, and the level of detail the FCC needs to evaluate the application.

It will be another 14 or 15 months before new devices must comply with the new rules, and perhaps another year or two after that before they become commonplace. But eventually your laptop, tablet, and smartphone Wi-Fi are all going to work better, even in places where many other devices are operating simultaneously. Enjoy those cat videos.

(FHH represents clients in this proceeding.)



Amazing grace

FCC Says Those Once Lost Shall Now be Found

By Peter Tannenwald
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Most people know that the FCC is taking steps to improve the ability of the 911 telephone system to identify a caller's location automatically. But think about how much more complicated it is to pinpoint the location of a person in distress at sea or in the desert or on a mountain top, where there are no street addresses or buildings to help guide rescuers to the victim.

The FCC has authorized a surprisingly large number of devices to assist search and rescue efforts in finding you in uninhabited areas (assuming that you're smart enough to carry such a device). And in a recent [Notice of Proposed Rulemaking](#) (NPRM), the Commission has proposed a number of changes in Parts 80 (Maritime Services) and 95 (Personal Radio Services) of its Rules, which include provisions covering search-and-rescue devices.

Like Heinz's 57 products, the devices come in an impressive array, each with its own particular features and its own particular alphabet soup acronym.

For example, **EPIRB**. That's the acronym for Emergency Position Indicating Radio Beacon. EPIRBs are carried on ships and transmit an alert signal that can be detected by search and rescue systems. They are compulsory on commercial vessels. EIPRBs operate on 406 MHz, which is monitored by the National Oceanic and Atmospheric Administration's SARSAT satellite tracking system. (EPIRBs used to operate on 121.5 and 243 MHz, but use of those frequencies was phased out starting in 2002 and absolutely prohibited as of December 31, 2006. However, as a result of an oversight, the Commission's rules have not included that specific prohibition since 2010. The NPRM proposes to correct that.)

The latest EPIRB enhancement is the addition of a GPS component which directly transmits accurate location information. Previously, EPIRBs provided

less precise positioning information based on Doppler Shift analysis detected when the signal is received.

The Coast Guard recommends use of GPS-enhanced EPIRBs, and the National Transportation Safety Board has suggested that the FCC make such use mandatory for all commercial vessels required to carry EPIRBs. Putting the icing on the cake, the Radio Technical Commission for Maritime Service (RTCM) has adopted a new standard which includes the capability to broadcast position data when an EPIRB is activated. With all of that prodding, the FCC is now proposing to incorporate the RTCM standard into its rules. It asks for comments on the appropriate timetable for phasing out non-GPS EPIRBs.

Like Heinz's 57 products, emergency locating devices come in an impressive array.

Next we have **PLBs**, or Personal Locator Beacons. These also transmit a distress signal on 406 MHz, but they may be carried on land by members of the general public. They're more effective than cellphones, since their signal reaches a satellite from remote areas where there is no cell service. The FCC's rules for PLBs (in Part 95) incorporate the RTCM's technical standard, but the FCC's version hasn't been updated to track changes adopted by the RTCM in 2012. Again, the FCC proposes to revise its rules to incorporate the updated RTCM standard (which includes new test procedures and operational scenarios for some PLBs).

The RTCM also recommended that language in Section 95.1401, which limits PLB transmissions to "transmission[s] of distress and safety communications," be revised to refer instead to "transmission[s] of distress and safety of life communications." The difference there is that mere "safety communications" involve the safety of life *or property*. The FCC has not proposed to make that change, but does solicit comments about it.

(Continued on page 11)



(Emergency Beacons - Continued from page 10)

And then we have **SENDS**, or Satellite Emergency Notification Devices. These are small transmitters that can be carried by individuals in remote areas. They typically operate as subscription services and alert a satellite system, which sends a web-based report to the operator of the service, which in turn dispatches rescue personnel. They rely on a different satellite system than PLBs and, consequently, they don't operate on 406 MHz. SENDS currently fall under the Mobile Satellite Service (MSS) rules rather than the Part 95 Personal Radio rules.

RTCM has developed technical standards for SENDS devices which it suggests be incorporated in Part 95. While the FCC invites comments on that suggestion, the Commission makes clear that that it believes RTCM's proposed revision to be unnecessary. In the FCC's view, manufacturers and MSS providers are free, without FCC compulsion, to adopt the RTCM standards if they wish to.

Next up, **MSLDs**. Those would be Maritime Survivor Locating Devices, normally worn by persons at risk of falling into the water – mariners, dock workers, divers who surface out of sight of their boat, etc. They may be attached to a life jacket. They're used when the person with the MSLD is likely to be located in a relatively small area (like near the boat he or she fell off).

RTCM has proposed adoption of its new MSLD technical standard and licensing "by rule" of these devices under either Part 95 of the Rules, like Citizens Band radio, or Part 80, which governs other marine devices. (When devices are licensed "by rule," users are deemed to be licensees for purposes of being subject to FCC jurisdiction, but they don't have to file applications and don't receive licenses in their individual names.) The FCC is inclined to include the RTCM standards in its rules, but is looking for input on several other related regulatory questions.

We're not finished yet.

AIS-SARTs, a/k/a Automatic Identification System Search and Rescue Transmitters, are carried on ships and survival craft. SARTs send out distress alerts by

actively reflecting 9.2-9.5 GHz band radar signals. If they detect incoming radar – likely to be in use on a craft which could effect a rescue – they transmit back a signal which shows up on the radar screen of the radar operator (yup, this is one way to "get on someone's radar screen"). AIS is a VHF maritime navigation safety system that transmits information about the identity, type, position, and navigational status of a ship to shore stations, other ships and aircraft equipped to monitor and track ships.

When a distress signal comes in from any type of alert system, it can be relayed to AIS-equipped vessels, one or more of which may be near the distress location and able to effect a rescue. Not all AIS-SARTs meet SART technical standards, and the FCC has issued rule waivers to allow them to operate. It now proposes to incorporate standards from the International Maritime Organization and International Electrotechnical Commission into its rules to establish minimum standards for AIS-SARTs.

The FCC proposes to make marine radio licenses assignable, like most other kinds of licenses.

Let's wrap up the alphabet soup with **VDSMS**, or VHF Digital Small Message Services. The basic proposal here is to bring VHF marine radio into the 21st century by allowing a variety of text messaging pursuant to yet another RTCM standard.

VDSMS would be permitted only when a channel is not being used for voice and might be barred altogether from channels which are co-channel or adjacent to safety and security frequencies.

On a somewhat tangential front, the FCC asks whether it should allow portable VHF marine radios to be carried by ship personnel while on shore. Apparently, it's fairly common practice for ships' crews to keep their marine radios on their belts when going ashore on business (or perhaps for a pint of grog). The FCC doesn't like the idea, noting that cellphones work just fine on shore. Still, the Commission will entertain comments if anyone can explain why using marine radios on shore would satisfy some unmet need.

Finally, the FCC proposes to make marine radio licenses assignable, like most other kinds of licenses. Under the current rules, if a vessel is sold, the old owner is supposed to cancel its license, and the new

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Crash course



The Potential Problem of “Name Collision” and What ICANN is Doing About It

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As [ICANN moves closer to authorizing a host of new generic Top Level Domains](#) (gTLDs), concern has been expressed about the possible impact that at least some of those new gTLDs could have on at least some corporate network operators and Internet users. While ICANN believes it unlikely that significant numbers of such operators/users will be affected, it is proceeding cautiously.

The potential problem? “Name collision.”

What is “name collision?” In [ICANN’s words](#),

A name collision occurs when an attempt to resolve a name that is used in a private name space (e.g., under a non-delegated Top Level Domain, or a short, unqualified name) results in a [Domain Name System (DNS)] query to the public DNS.

*Report:
The risk of collisions is manageable for most, but not necessarily all, new gTLDs.*

As [ICANN consultants have described the problem](#), “Name collision creates ambiguity and instability, because apparently identical strings name different things in different contexts.” In their view, the consequences range from mere “user confusion” to far more dire possibilities, including “application failures, denial of service, or serious breaches of security”.

In more pedestrian terms, name collision can occur when a private network – say, a company’s internal email system – has been set up to interpret a particular term (or, in ICANN parlance, a “string,” like “.mail”) as referring to addresses strictly within that internal system. But if that particular term also happens to be a gTLD used across the Internet – like “.com”, “.edu”, “.org” or other familiar gTLD strings – then the address of email intended to be limited to the company’s internal system could be misread and the email instead routed to the broader Internet (*i.e.*, the public DNS).

Obviously, that could have serious legal and/or economic consequences for the sender, especially if personal, confidential or proprietary financial information were to be misrouted and revealed to unintended recipients.

The problem of name collision is not new. [ICANN has known of it for years](#) and has taken steps to reduce its potential impact. As a result, no major catastrophes have occurred (as far as we know).

But concern has been rekindled with the raft of proposed new gTLDs currently under consideration at ICANN.

Those proposals include hundreds of strings such as .guru, .health, .sport, .cloud, .bank, and .music. More troublesome are the proposed strings .mail, .corp and .home, terms which are already used in many internal email ad-

addressing schemes in larger companies. Designation of any of those three strings as gTLDs would substantially increase the possibility – indeed, likelihood – that internal email will be misrouted to the DNS instead of remaining on a company’s internal network.

To get out in front of the problem, ICANN commissioned an independent report to identify possible ways of mitigating the potential risks of domain name collisions. The [Report, released in late February](#), concludes that the risk of collisions is manageable for most, but not necessarily all, new gTLDs through the implementation of safeguards and the development of an emergency response mechanism by ICANN.

However, because the use of .corp, .home and .mail is so widespread in internal networks, the Report recommends that those three strings be perma-

(Continued on page 13)



(Name Collision - Continued from page 12)
nently reserved for internal use.

With respect to other proposed gTLDs currently in the pipeline, the Report recommends that a mandatory 120-day controlled interruption period be imposed beginning immediately after the delegation of each new gTLD. During that period, the prevalence of collisions involving each new gTLD can be evaluated and remedial measures to avoid harm to networks and users can be developed. At the same time, ICANN will establish procedures to identify collision events that pose a “clear and present danger to human life” and take corrective actions to suspend problem-

atic addresses and ensure the compliance of new gTLD registries with such actions.

Companies with internal networks and addressing schemes need to be aware of the risks of name collision, monitor for problems, and be prepared to address them if they arise. Should you find problems within your internal network as new gTLDs are released, feel free to contact us for assistance and outreach to ICANN.

Note that ICANN is accepting comments on the February Report. Anyone so inclined may submit comments by **April 21, 2014**.



(Emergency Beacons - Continued from page 11)
owner applies for its own license. There is no mutual exclusivity for these licenses,

and applications may be filed at any time, so getting a new license is normally pretty easy. Nevertheless, the existing system has resulted in the need for special temporary authority when a ship sale closes and the buyer’s license has not yet been issued. The FCC previously amended analogous rules governing the as-

signment of aircraft licenses, and the Commission is inclined to treat those aloft and those afloat the same.

If you can remember all the acronyms and have something to say about the FCC’s proposals, you can file comments by going to [this FCC site](#) and uploading your comments in Proceeding Number 14-36. The Comment deadline is June 2 and Reply Comments would be due June 30.



(Globalstar - Continued from page 7)

Globalstar. This overlapping use of the same spectrum has not heretofore been a problem since the relatively few BAS stations in the band could be coordinated with Globalstar’s satellite operations to avoid interference. Wide scale use of this same band by Globalstar for its terrestrial operations would be a different story. The FCC must therefore consider whether to re-farm the BAS stations to a different frequency band – probably at Globalstar’s expense – or come up with some other way to avoid interference.

Finally, the plan to incorporate the 2473-2483.5 MHz unlicensed band into Globalstar’s managed network raises the question of how to handle the equipment that would be operating in the unlicensed band. Such equipment has been certified for operation under Part 15 (unlicensed operation) and has generally been programmed not to operate on the band that Globalstar needs it to be on. Globalstar indicates that the equipment in the field can be rendered usable in the desired band by software upgrades and can then be controlled

by equipment certified for Globalstar’s use. Under current FCC procedures, re-certification of the existing equipment would be required before it could be used as proposed. Exactly how to accomplish the certification process with a minimum of re-certification applications by numerous manufacturers is another issue that will have to be addressed.

So while Globalstar’s proposal has now taken a major step forward, a number of technical and regulatory hurdles remain to be resolved before its ambitious plans can come to fruition. The problems do not seem insurmountable at this point, but the comments submitted in the docket will flesh out the situation. Comments from interested parties are due no later than **May 5, 2014**, with replies due **June 4**. Comments may be submitted electronically: Go to [the FCC’s ECFS filing site](#) and file them under Proceeding Number 13-213.

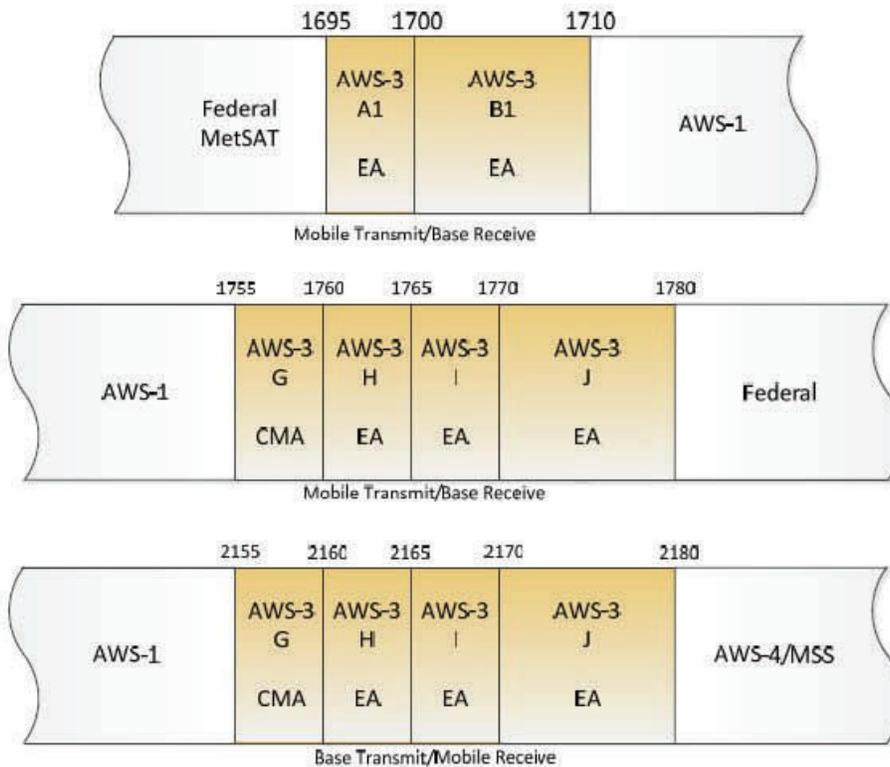
[Disclosure: The author has a small ownership interest in Globalstar.]



(AWS-3 - Continued from page 1)

Next the band plan establishes four licenses in the core 1755-1780/2155-2180 MHz bands, with the upper band designated for downlink and the lower for uplink. The trick here was to make some spectrum reasonably available to everyone. The FCC accomplished this by making one 10 MHz (2x5) license available on the CMA (Cellular Market Area) basis preferred by Tier III carriers who need to tailor

The FCC adopted service rules which in most respects were consistent with the AWS-1 rules in terms of interference standards, out of band emissions, and comportment with the general rules applicable to all Part 27 licensees. Of particular note is the 12-year license term granted to AWS-3 licensees – a bit longer than the usual 10 year terms granted to Part 27 licensees – in view of the need to coordinate the



<u>Block</u>	<u>Frequencies</u>	<u>Pairing</u>	<u>Bandwidth</u>	<u>Area</u>	<u>Licenses</u>
G	1755-1760 and 2155-2160 MHz	2 x 5 MHz	10 MHz	CMA	734
H	1760-1765 and 2160-2165 MHz	2 x 5 MHz	10 MHz	EA	176
I	1765-1770 and 2165-2170 MHz	2 x 5 MHz	10 MHz	EA	176
J	1770-1780 and 2170-2180 MHz	2 x10 MHz	20 MHz	EA	176
A1	1695-1700 MHz	1 x 5 MHz	5 MHz	EA	176
B1	1700-1710 MHz	1 x10 MHz	10 MHz	EA	176

spectrum purchases to the smaller geographic areas, and commensurately smaller wallets, they have to work with. The rest of these licenses are allotted on the EA basis preferred by the larger carriers. Of the three EA licenses in this category, two are configured on the same 10 MHz (2x5) pattern as the CMA license, while one, obviously designed with the big boys in mind, is 20 MHz (10x10).

clearing of the band with current Federal users. (More on that later.) Licensees must cover 40% of their licensed population within six years and 75% of their licensed population within 12 years. Failure to meet the first benchmark results in two years being shaved off the final build-out deadline. The penalty for failure to meet the second benchmark is loss of

(Continued on page 15)



(AWS-3 - Continued from page 14)
license.

A subject of considerable interest and discussion had been the question of whether the FCC would limit the ability of large carriers to acquire spectrum in this band. The governing statute prohibited the Commission from freezing out classes of bidders from acquiring the spectrum per se, but it did give the FCC some wiggle room to place limits on how much a given entity could acquire. The FCC decided to punt on the latter issue since the question of spectrum caps based on concentration of spectrum ownership is being considered on an across-the-board basis in a separate Docket (WT No.12-269). The FCC promised that that Docket would be wrapped up well before this auction commences in the fall of 2014, so everyone will know by then whether any spectrum limits will apply to new spectrum acquisitions (whether by auction or in the secondary market).

*The FCC's decision
to mandate
interoperability is huge.*

A benefit of the AWS-3 band for smaller carriers is the FCC's decision to mandate interoperability between and among the 1755-1780/2155-2180 MHz licenses (but not the 1695-1710 MHz licenses) and the AWS-1 licenses. This ruling is huge because it ensures that there will be a handset and roaming ecosystem across a good bit of the AWS band that all carriers will be able to take advantage of, unlike the 700 MHz band where interoperability was not initially required. The FCC did not mandate interoperability with DISH's AWS-4 band (despite DISH's request), but left the door open for such a mandate at a later date if interoperability problems develop.

While all of the above is rosy, there are, inevitably, complications that will cast a shadow over the spectrum for potential bidders. The way this spectrum came to be available is by the Department of Defense proposing a plan, later supported by NTIA, whereby it would relatively quickly clear defense-related operations from the 1755-1780 MHz band and relocate them to the 1780-1850 MHz band or the 2025-2110 MHz band. It has estimated that the cost of this relocation effort is \$3.5 billion. While this \$3.5 billion number is probably inflated, even a reduced figure creates a couple of problems.

First, the auction must raise and allocate 110% of the cost of relocating Federal users to clear the band.

Those funds would not be available to be paid toward the \$7 billion needed to fund the First Net public safety operations. Several Commissioners and others have suggested that the combination of proceeds from the recently concluded H Block auction (\$1.56 billion) and the AWS-3 auction would get the Commission pretty close to the figure it needs to fund First Net without relying on receipts from the broadcast Incentive Auction now planned for mid-2015. If the Commission were able to net \$5.5 billion from this auction, that would make it more likely that the Incentive Auction will yield enough cash to pay off the broadcasters with enough left over to pay admin expenses and fill out the First Net funding. So the costs of relocation and the amount generated by this auction have wider implications than just this band.

The other problem is that there remain numerous Federal users in the band that will have to be coordinated with either in the short term (while they transition to greener pastures) or permanently. Potential licensees in the 1695-1710 MHz band already know that they will have to coordinate with the Feds in 27 "Protection Zones" to avoid interference to meteorological satellite stations. In the 1755-1780 MHz band, auction winners who want immediate access to the spectrum they have purchased will have to coordinate with the existing Federal users while those users vacate the premises. In some cases, they will have to share the spectrum with Federal users permanently.

Because the extent, duration and degree to which the continuing use by the Federal government will encumber the bands is an important factor in assigning a dollar value to the licenses, NTIA is supposed to be posting transition plans for government users on its website no later than 120 days before the auction. We see this as a potential choke point in the process since it requires accurate and alacritous action by numerous Federal agencies in a short time frame. If there is any slippage, it could throw off the auction start date, which is itself tied to the February 22 deadline to complete the licensing process.

So the AWS-3 licensing process has many complex moving parts, but at least we now have the framework to try to determine how valuable the licenses may – or may not – be.



(E911 Location - Continued from page 3)

Given all these considerations, the FCC is now proposing to require CMRS operators to hone their indoor E911 location accuracy accordingly. In particular, CMRS operators would have to:

- 📞 provide horizontal location (x- and y-axis) information within 50 meters of the caller for 67% of 911 calls placed from indoor environments within two years of the effective date of adoption of rules, and for 80% of indoor calls within five years.
- 📞 provide vertical location (z-axis) information within three meters of the caller for 67% of indoor 911 calls within three years of the adoption of rules, and for 80% of calls within five years. The FCC chose the three-meter spec because the average floor-height in multi-story buildings is between 3.1-3.9 meters (depending on the type of building). Thus, the three-meter spec proposed by the Commission should permit first responders to narrow the search for the caller to a single floor.
- 📞 meet these indoor requirements at either the county or PSAP geographic level.

And a chronological component would be added to the accuracy determination: CMRS providers would have to generate a location fix (“time to first fix”) in no more than 30 seconds in order for the 911 call to be counted towards compliance with location accuracy requirements. (Short calls of, *e.g.*, 10 seconds or less could be excluded in measuring compliance with accuracy requirements because such call may not provide enough time to get a location fix.)

Indoor location accuracy requirements could be demonstrated through participation in an independently administered test bed program modeled on the indoor test bed administered by the Communications Security, Reliability, and Interoperability Council (CSRIC). Providers could also use alternative means providing the same level of test result reliability.

Along with the more stringent accuracy standards, the Commission is proposing to:

- 📞 standardize the content and the process for delivery of confidence and uncertainty data that is generated by CMRS providers for each wireless 911 call and delivered to PSAPs on request.
- 📞 require CMRS providers to inform PSAPs of the specific location technology or technologies used to generate location information for each 911 call.
- 📞 accelerate the previously established timeframe for replacing the current handset- and network-based accuracy requirements with a unitary requirement.
- 📞 require that CMRS providers periodically report E911 Phase II call tracking information, indicating what percentage of wireless 911 calls include Phase II location information.
- 📞 establish a separate process by which PSAPs or state 911 administrators could raise complaints or concerns regarding the provision of E911 service.
- 📞 require CMRS providers to conduct periodic compliance testing.

A chronological component would be added to the accuracy determination.

The *NPRM* is chock-full of related questions about which the FCC seeks public comment, including: the benefits of implementing these rules; the costs to carriers; whether a specific waiver process should be implemented for carriers seeking relief from the indoor location accuracy requirements; whether compliance within the proposed timeframes is reasonable; and whether the availability of Phase II information for roamers continues to be a concern, since the evolution of location technology may have reduced differences among carriers that could previously have complicated the location process for roamers. Because of the wide-ranging nature of the FCC’s proposals, all CMRS providers should take the time to review the *NPRM* carefully to assess its potential impact on their operations.

For this author, though, the FCC’s proposal regarding the use of z-axis data to benefit the greater good is probably the most significant use of that information since Capt. Kirk issued the command to move the Enterprise [Z-minus ten thousand meters](#) to [defeat Khan](#).

Comments are due May 12 and replies by June 11.



(AT&T-Leap Transaction - Continued from page 2)

As usual, strident claims by numerous parties that the transaction would seriously worsen access to reasonable roaming rates were disposed of with the comment that anybody aggrieved by the roaming rates being offered could file a complaint with the Enforcement Bureau. AT&T did make a last minute “commitment” to maintain Cricket’s Lifeline service for some indefinite period of time, a commitment that probably made no sense to Lifeline customers who were unaware that their service was even in issue because this aspect of its plans had been kept confidential.

Result: one less nationwide cellular carrier and one fewer low cost alternative to the Big Two.

One interesting procedural feature of the FCC’s action merits comment. The FCC has a “shot clock” that is supposed to serve as an informal, non-binding 180 day period in which to act. The shot clock is not codified in any rule and has no binding effect on anyone. Historically, the Commission has used it exactly as it should be used – as a loose yardstick to keep the ex-

amination of complex deals from dragging on too long. Here, however, the shot clock drove the FCC to feverish activity as the 180th day approached, as though the shot clock meant something. A decision was reached on the 179th day, despite the flood of new developments, last minute changes in representations and commitments, and a flood of ex parte submissions, all of which should have justified a suspension of the shot clock – or just ignoring it. The elevation of the shot clock in this case to a moral imperative contrasts sharply with the way the FCC routinely ignores deadlines for it to act which are actually set forth in the rules and the Communications Act and are, therefore, legal requirements.

So the end result is that the nation has one less nationwide cellular carrier and one fewer low cost alternative to the Big Two (and a Half, if we count Sprint). No one will check in a year or two to see if the promised cost savings are ever passed on to consumers, and the competitive pressure that Cricket, for all its faults, put on the Big Two will be gone forever.



(Text-to-911 - Continued from page 3)

comparable location information in conjunction with emergency texts; delivering text-to-911 over non-cellular data channels; and supporting text-to-911 for consumers while roaming on CMRS networks. (The FNPRM is chock-full of diagrams showing various OTT delivery models, which may or may not be capable of sending the required information to the PSAPs so they in turn can send first responders to the right location.)

The FCC is also aware that many PSAPs are not currently capable of accepting and processing 911 text messages. But the Commission expects that, by prodding text message providers into action, it will also be helping PSAPs position themselves to handle the incoming 911 texts. (The theory there is that, if budgeting officials for states and localities responsible for PSAPs know that the public will be able to send text-to-911 messages, those officials may be more inclined to gear up to receive those messages.)

As far as implementation timeframes go, the FCC is

proposing that text-to-911 capabilities should be implemented by all text providers by December 31, 2014. As of that date the text providers should be prepared to provide that service *within a reasonable time (not to exceed six months)* after a PSAP has requested it.

Recognizing that OTT texting app developers could well face serious challenges in getting their services to comply with the text-to-911 mandate, the FCC asks for comment on whether some alternative timeframe should apply to OTT text providers. If OTT-ers can’t meet the FCC’s implementation deadline, those services may have to sit on the sidelines until they can work out the bugs. That would mean that customers would have to go back to the Big Four to get their texting fix. While such an outcome would no doubt be a boon to the Big Four, [bill shock](#) could again come to the fore as teens blast through their texting bucket plans.

The deadline for comments in response to the FCC’s PS/SFNPRM has just past, but reply comments may still be filed through **May 4, 2014**.

And last but not least, another

Report from Planet FCC

Our latest dispatch from that sometimes wacky planet orbiting along the Potomac River

Followers of the Washington scene may be aware that *the* Federal government has been shut down repeatedly this year due to “adverse weather conditions.” While adverse weather conditions extreme enough to shut down the critical workings of our government may conjure up visions of devastating tsunamis, the Johnstown flood, towns laid waste by tornados, or blinding blizzards, here in Washington all it takes is a few inches of snow to grind the bureaucracy to a halt. Indeed, on one occasion this year, all it took was the *prediction* of some snow (which never actually materialized) to have school children covering in their homes and government employees hunkering down in shelters.

The FCC’s rules make provision for such eventualities by automatically treating a snow day as a weekend or federal holiday for purposes of computing due dates for filings. This is important for us of the legal persuasion who must file things by what we call “a date certain.” (Regular people would call it a certain date.) If you don’t file things on or before the

deadline, they can be legally dismissed, and in some cases important and irremediable consequences can ensue.



FCC representative stops by International Space Station to make courtesy call, inspect equipment certifications.

This year the FCC’s Office of the Secretary has taken to issuing helpful little public notices alerting people to the fact that filing deadlines have been affected by the weather closures. On January 23, for example, it issued a notice advising people that filings which would have been due on January 21 were now due on January 22. On February 19 it released a similar notice announcing that filings due on February 13 would now be due on February 14. On March 19, another in this series declared that filings due on

March 17 would now be due on March 18. Do you see the pattern emerging? Issuing an informative public notice *after* the new deadline has passed serves absolutely no useful purpose. It’s like reminding you on April 20 that your tax returns were due on April 15 and serious penalties for late filing may apply. So while we appreciate the thought, enough already!