

**THE YEAR IN WIRELESS
OCTOBER 2001 — SEPTEMBER 2002**

By Ari Fitzgerald and Clark Wadlow

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By Ari Fitzgerald and Clark Wadlow ^{1/}

Overview

Three major and sometimes conflicting themes have emerged over the past twelve months regarding the Federal Communication Commission's ("Commission") regulation of the U.S. wireless industry. First, the Commission has been sensitive to the wireless industry's difficulties in raising capital. Although some new wireless companies secured funding over the last twelve months, the capital markets have been generally cautious about the long-term prospects of the wireless sector. This cautiousness stems, in part, from the weak overall economy, the especially disappointing performance of many telecommunications and Internet companies and the rash of accounting scandals that have plagued the telecommunications industry. As if these problems were not enough, the wireless industry has been especially hard hit by another concern: the perception within the investment community that high debt service obligations, fierce competition, the lack of significant high revenue applications and high capital expenditures will make it difficult for many wireless operators to achieve near term free cash flow. Some of the Commission's actions over the past twelve months suggest a sensitivity to these challenges. ^{2/}

Second, the Commission has perceived a change in the way consumers view wireless. No longer is wireless viewed as a nascent service. According to the Cellular Industry and Internet Association ("CTIA"), there were 137.7 million mobile wireless subscribers in the U.S. as of September 2002. With such significant subscribership, wireless is increasingly becoming a regular and necessary part of the cultural landscape. Moreover, some individuals are giving up their landline telephone altogether and using wireless as their only phone. In such an environment, government regulators cannot help but expect wireless carriers to shoulder a larger share of the public and consumer interest burdens borne by the telecommunications industry in general. This past year has seen the Commission struggle with how to produce these benefits, ensure compliance with its

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^{2/} The downturn in the overall economy, the bust of the dot-coms and disappointment in the financial performance of the telecommunications industry in general has taken its toll on the wireless sector. Although the major providers of mobile services continue to attract new subscribers and revenues, the fiercely competitive nature of the business, the significant capital expenditure demands required and current levels of indebtedness pose challenges for near term profitability. During the bull markets of the late 1990s and 2000, wireless carriers were able to fund their businesses through the capital markets. Securing such funding is much more of a challenge in the current environment.

regulatory mandates and facilitate a predictable and stable regulatory environment without further damaging the fragile financial state of the wireless industry. In decisions regarding regulatory mandates such as Enhanced 911 (“E911”), Local Number Portability (“LNP”) and the Communications Assistance for Law Enforcement Act (“CALEA”),^{3/} the Commission sought to strike a balance between these competing concerns.

Finally, the Commission has made the goal of achieving a rational, market-based spectrum policy a priority. The Commission’s renewed focus on spectrum policy was prompted, in part, by several high profile and contentious spectrum and new technology proceedings this year. These proceedings brought to the fore a number of tensions that plague the Commission’s current spectrum management regime. Despite the economic downturn, the demand for spectrum remains strong. As a result, issues surrounding its allocation, assignment and use occupied a significant amount of the Commission’s wireless regulatory agenda. Like the other major issues confronted over the past twelve months, the Commission conducted its spectrum policy deliberations with a sensitivity toward the current state of the capital markets.

Following below is a discussion of the major wireless proceedings and matters handled by the Commission over the past twelve months. For convenience, the discussion is separated into three sections: (1) Regulatory Policy Matters; (2) Spectrum Allocation and New Technology Matters and (3) Auction and Licensing Matters.

I. Regulatory Policy Matters

Over the past twelve months the Commission has struggled to balance its desire to uphold regulatory mandates it believes are in the public interest, against its desire to soften, where possible, the financial impact of those mandates on an industry that is finding it very difficult to raise capital. Chairman Powell and his Republican colleagues have committed to eliminating and streamlining regulation. During the past year, the Commission delivered on that promise in two important respects. First, in December 2001 the Commission released an Order eliminating the CMRS spectrum cap (“Spectrum Cap”) throughout the country and eliminating the cellular cross-interest rule in urban areas.^{4/} This action should make it easier for consolidation to occur within the wireless industry. Second, in September 2002, the Commission issued an Order providing for a 5-year sunset of the long-standing requirement that cellular carriers provide analog service to subscribers in good standing.^{5/}

^{3/} Pub. L. No. 103-414, 108 Stat. 4279 (1994) (codified as amended in various sections of 18 U.S.C. and 47 U.S.C. §§ 229, 1001-1010, 1021).

^{4/} See 2000 Biennial Regulatory Review; Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, *Report and Order*, FCC 01-328 (rel. Dec. 18, 2001) (“*Spectrum Cap Order*”).

^{5/} See In the Matter of Year 2000 Biennial Review – Amendment of Part 22 of the Commission’s rules, WT Docket No. 01-108, *Report & Order* (rel. September 24, 2002) (“*AMPS Report & Order*”). Recently, the Commission, over the objection of Commissioner Copps, also made an affirmative decision not to regulate, despite being asked to do so by CTIA. In response to a petition for rulemaking by CTIA requesting the adoption of rules to implement the wireless location information privacy amendments to

In both instances the Commission concluded that deregulation was warranted in view of the robust competition that exists among wireless carriers. In addition, both decisions reflect the Commission’s skepticism regarding the benefits of continued broad-based regulation. In the spectrum cap proceeding, for example, the Commission, reflecting a view long held by Chairman Powell, indicated that it was uncomfortable with continued enforcement of ex ante rules limiting the amount of spectrum any one carrier could hold in a given local market.^{6/} Its spectrum cap decision indicated a preference for case-by-case review. Similarly, in establishing a sunset of the analog cellular requirement the Commission indicated its belief that the rule no longer plays a constructive role in ensuring maximum access to mobile services, but instead prevents affected carriers from making efficient use of their spectrum.^{7/}

In other instances, the Commission, while not eliminating the regulatory requirement outright, provided relief from the impact of approaching regulatory deadlines. In the wireless E911 context, for example, the Commission granted requesting wireless carriers additional time to comply with its Phase II requirements.^{8/} The Commission suggested, however, that it would not be inclined to grant any additional waiver requests and would refer non-compliant carriers to the Enforcement Bureau for possible action.^{9/} Similarly, while not eliminating the wireless LNP requirement outright, the Commission granted wireless carriers an additional year to implement LNP. In both cases, it was necessary for the Commission to balance the potential public benefits of sustaining the mandate against the financial and other burdens associated with strict compliance. Just as important, the Commission appeared eager not to give the impression that it would willingly overlook the failure by regulated entities to comply with Commission mandates, including those imposed by previous Commissions.

Following below are more detailed discussions of the most noteworthy wireless regulatory policy actions taken by the Commission over the past twelve months:

Section 222 of the Communications Act, Pub.L. No. 106-81, 113 Stat. 1286, § 5 (October 26, 1999), the Commission noted that the “statute imposes clear legal obligations and protections for consumers.” In the Matter of Request by the Cellular Telecommunications and Internet Association to Commence Rulemaking to Establish Fair Location Information Practice, *Order*, WT Docket No. 01-72 (rel. July 24, 2002 at ¶ 1. Because it “[did] not wish to artificially constrain the still developing market for location-based services,” *id.*, the Commission determined that it would not provide further clarification at this time. It did commit, however, to vigorously enforce the law as written and initiate a regulatory proceeding if needed in the future. *Id.*

^{6/} *Spectrum Cap Order* at ¶ 4.

^{7/} *AMPS Report & Order* at ¶ 8.

^{8/} See, e.g., Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by Nextel Communications, *Order*, 16 FCC Rcd 18277 (2001) (“Nextel E911 Waiver Order”).

^{9/} *Id.* at ¶ 36.

A. CMRS Spectrum Cap

As part of its 2000 biennial review, the Commission initiated a reexamination of its CMRS spectrum aggregation limits with the release of a January 2001 NPRM.^{10/} After reviewing the proceeding record, the Commission, in December 2001, issued an Order that eliminates the existing spectrum cap on CMRS spectrum as of January 1, 2003.^{11/} During the interim period, the Order immediately raised the cap to 55 MHz in all markets. The Order also eliminated the cellular cross-interest restriction in Metropolitan Statistical Areas (“MSAs”), but retained the rule in Rural Service Areas (“RSAs”).

The spectrum cap applies to a total of 180 MHz of spectrum allocated to the cellular, PCS and SMR services.^{12/} It was instituted in 1994 as a means of limiting the amount of spectrum any one entity could control in a given local market, in order to foster competition from multiple providers.^{13/} Originally, no entity could have an attributable interest in more than 45 MHz of spectrum with a significant geographic overlap. In order to spur deployment of services in rural areas, the Commission later increased the limit to 55 MHz in any RSA, while maintaining the 45 MHz cap in the more populated MSAs.^{14/} In addition to the spectrum cap, the Commission’s cellular cross-interest rule prohibited an entity with an attributable interest in a licensee of one cellular spectrum block from holding more than a five percent interest in a licensee of the other cellular spectrum block in any overlapping market.^{15/}

In its most recent spectrum cap decision, the Commission considered the pros and cons of maintaining the existing, bright-line spectrum cap versus the alternative method of evaluating spectrum acquisition transactions on a case-by-case basis. It indicated that, while offering greater certainty and faster processing, the spectrum cap is an inflexible regulatory tool that can permit some problematic transactions to go forward while precluding other, beneficial ones.^{16/} In light of the significant increase in CMRS competition, the Commission determined that it is now appropriate to move to a more flexible system of case-by-case review of spectrum aggregation transactions.^{17/} However, the Commission delayed the elimination of the spectrum cap

^{10/} See 2000 Biennial Regulatory Review; Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, *Notice of Proposed Rulemaking*, FCC 01-28 (rel. Jan. 23, 2001). Section 11 of the Communications Act requires the Commission to determine, every two years, whether any of its telecommunications carrier regulations are “no longer necessary in the public interest as the result of meaningful economic competition between providers of such service.” 47 U.S.C. § 161(a)(2).

^{11/} See *Spectrum Cap Order*, FCC 01-328. The spectrum cap rule is found at 47 C.F.R. § 20.6.

^{12/} 47 C.F.R. § 20.6.

^{13/} See Implementation of sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Third Report & Order*, 9 FCC Rcd 7988, 8100-01, ¶¶ 238-40 (1994).

^{14/} See 1998 Biennial Regulatory Review, Spectrum Aggregation Limits for Wireless Communications Carriers, WT Docket No. 98-205, *Report & Order*, 15 FCC Rcd 9219 (1999), *aff’d Memorandum Opinion & Order on Reconsideration*, 15 FCC Rcd 22072 (2000).

^{15/} 47 C.F.R. § 22.942(a). Cellular markets are known as Cellular Geographic Service Areas (“CGSAs”).

^{16/} *Spectrum Cap Order* at ¶ 4.

^{17/} *Id.* at ¶ 6.

in order to provide the Commission and the Department of Justice (“DOJ”) time to develop procedural and substantive guidelines to be used for evaluating such transactions.^{18/} During the interim period, the Commission raised the spectrum cap to 55 MHz in all markets to address the concerns of some carriers regarding near-term capacity constraints in certain urban markets.^{19/}

Based on a finding that cellular duopoly conditions no longer exist in most MSAs, the Commission determined that there is no reason to treat cellular spectrum differently from other CMRS spectrum.^{20/} Accordingly, it eliminated the cellular cross-interest restriction for MSAs.^{21/} However, the Commission retained the rule in RSAs where competition is not as strong, although it indicated a willingness to grant waivers of the rule in RSAs where it can be shown that competitive harm would not likely result.

B. Analog Cellular Proceeding

In September 2002, the Commission issued an Order providing for a five-year sunset of the long-standing requirement that cellular providers offer analog mobile services compatible with the Advanced Mobile Phone Service (“AMPS”) standard to all subscribers in good standing.^{22/} Although some participants in the proceeding had sought the immediate elimination of the requirement,^{23/} the Commission established the 5-year sunset in an effort to prevent disruption of service to consumers with hearing disabilities who, on account of the absence of hearing aid compatibility, cannot use digital phones, and emergency-only users.^{24/}

The Commission’s decision was based largely on its conclusion that the requirement, which was enacted in the 1980s when there were only two mobile phone service providers in any given local market, had outlived its usefulness in ensuring that

^{18/} As of September 2002, the Commission still had not released to the public merger guidelines to be used in its new case-by-case review approach, and it now appears that no such guidelines will be issued. Some carrier representatives reacted negatively to the suggestion that guidelines were being drafted by Commission staff. See Paul Kirby, “Wireless Industry Opposes FCC Guidelines for Mergers,” *Telecommunications Reports*, Aug. 5, 2002 (citing comments by Wireless Bureau Chief Thomas Sugrue). CTIA, for example, urged the Commission not to adopt any “special rules” applicable only to wireless carriers, but instead to rely on the Justice Department’s established and well-known anti-trust merger review guidelines. Despite the fact that Wall Street analysts have been recommending consolidation as a means to bolster the financial stability of the industry, observers do not expect any guidelines to permit mergers that would result in large (e.g., 40 percent) market shares. Dan Meyer, “As Jan. 1 Looms, Questions Surround Consolidation,” *RCR Wireless News*, July 1, 2002 (quoting various wireless industry analysts and suggesting that mergers resulting in a 40 percent market share would unlikely pass regulatory review).

^{19/} *Spectrum Cap Order* at ¶ 6.

^{20/} *Spectrum Cap Order* at ¶ 7.

^{21/} *Id.*

^{22/} In the Matter of Year 2000 Biennial Review – Amendment of Part 22 of the Commission’s Rules, WT Docket. No. 01-108, *Report and Order*, FCC 02-229 (rel. September 24, 2002) (“*AMPS Report and Order*”) at ¶ 8.

^{23/} See Comments of AT&T Wireless and Cingular in WT Docket No. 01-108.

^{24/} *AMPS Report and Order* at ¶ 8.

the public had access to low-cost mobile handset equipment and nationwide roaming.^{25/} The Commission indicated that the market for mobile services is now fiercely competitive, and that maintaining the analog mobile service requirement would force cellular providers to use spectrally inefficient technology that disadvantages consumers by limiting the services that can be provided.^{26/} On the other hand, the Commission recognized that a sizeable number of consumers, especially the hard-of-hearing and emergency services users, currently rely on analog technology and will continue to do so until digital alternatives become available.^{27/} Because no digital alternatives are currently available to such consumers, the Commission felt it necessary to continue to enforce the analog cellular requirement for at least another 5 years.^{28/}

C. Wireless E911

During the past twelve months the Commission once again provided regulatory relief from its E911 mandates. In providing the relief, the Commission was required to take into account competing priorities among wireless carriers and equipment vendors, and make judgments about the most appropriate manner in which to facilitate the rollout of E911. In a series of orders issued since 1996, the Commission has adopted a variety of requirements whereby wireless carriers must provide to Public Safety Answering Points (“PSAPs”) information regarding the location of an emergency 911 caller. These requirements are divided into two phases. Phase I, which became effective on April 1, 1998, requires a carrier to provide to the PSAP the telephone number of the handset originating the 911 call, and the physical location of the cell site or base station that received the call.^{29/} Phase II requires carriers to deliver more accurate latitude and longitude information, known as Automatic Location Information (“ALI”), to the PSAP.^{30/}

In an Order released in 1999, the Commission revised its E911 rules to establish deployment schedules that were designed to permit carriers to choose either a handset-based or a network-based technology to satisfy their respective Phase II requirements.^{31/} Carriers choosing a handset-based solution were required to meet improved location accuracy requirements and begin offering ALI-capable handsets no later than October 1, 2001.^{32/} By the summer of 2001, however, all the nationwide carriers had requested

^{25/} *Id.*

^{26/} *Id.* at ¶ 12.

^{27/} *Id.* at ¶¶ 24-33.

^{28/} *Id.* Due to its concern about hearing aid compatibility with digital devices, the Commission required nationwide mobile carriers to report periodically (i.e., three and four years from the date of its decision) on developments with respect to digital-hearing aid compatibility. *Id.* at ¶ 31. The Commission committed to taking the information into account in determining whether to initiate a proceeding to extend the analog cellular requirement. *Id.* at ¶ 32.

^{29/} 47 C.F.R. § 20.18(d).

^{30/} 47 C.F.R. § 20.18(e).

^{31/} 47 C.F.R. § 20.18(g). Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Third Report & Order*, 14 FCC Rcd 17388 (1999).

^{32/} See *Third Report & Order* at 17407, ¶ 41.

waivers of the Commission's Phase II requirements.^{33/} In response, the Commission, noting delays in the delivery, integration and testing of compliant equipment, adopted revised E911 Phase II deployment plans and waiver conditions for the six nationwide carriers.^{34/} In each case the applicant was afforded additional time to comply with the Commission's Phase II rules.^{35/} To underscore the importance of the E911 requirements, however, the Commission's waiver orders stressed that carriers opting for the handset-based approach would continue to be bound by the Phase II requirement that 95 percent of their handsets in circulation be ALI-capable by December 31, 2005.^{36/}

Since the Commission granted the waivers for the nationwide carriers, it has taken a number of additional actions related to wireless E911. Several of the rulings are outlined below.

- On October 2, 2001, the Commission amended its rules to clarify what constitutes a valid PSAP request triggering a wireless carrier's obligation to provide Phase II E911 information to the PSAP.^{37/} Specifically, the Commission held that "a wireless carrier must provide ALI data within the six-month period following the date of a PSAP request."^{38/} The Commission indicated further that a PSAP request will be deemed valid if: (1) a mechanism is in place by which the PSAP will recover the costs of the facilities and equipment necessary to receive and utilize the E911 elements; the PSAP has ordered the equipment necessary to receive and utilize the E911 data and the equipment will be installed and capable of receiving and utilizing the data no later than six months following the request and the PSAP has made a timely request to the appropriate Local Exchange Carrier ("LEC") for the necessary trunking and other facilities needed to enable the E911 data to be transmitted to the PSAP or (2) alternatively, a PSAP funding mechanism is in place; the PSAP is Phase I capable using a Non-call Associated Signaling ("NCAS) technology and the PSAP has made a timely request to the appropriate LEC for the ALI database upgrades necessary to enable the PSAP to receive the data.^{39/} Sprint and Cingular have sought reconsideration of the

^{33/} See, e.g., *Verizon Wireless Updated Phase II E911 Report & Request for Limited Waiver* (filed July 25, 2001).

^{34/} See, e.g., *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by Verizon Wireless, Order*, 16 FCC Rcd 18364 (2001). The Commission granted five waivers on October 12, 2001. VoiceStream's waiver application was granted in 2000. *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion & Order*, 15 FCC Rcd 17442 (2000).

^{35/} See, e.g., *Nextel E911 Waiver Order, infra*. Nextel was granted an additional year to begin selling ALI-capable handsets. The waiver requires Nextel to begin selling ALI-capable handsets by October 1, 2002; ensure that at least 10 percent of all new handsets activated are ALI-capable by December 31, 2002; ensure that at least 50 percent of all new handsets activated are ALI-capable by December 1, 2003; ensure that 100 percent of all new digital handsets activated are ALI-capable by December 1, 2004 and ensure that 95 of all subscriber handsets in service are ALI-capable by December 31, 2005. *Id.* at ¶ 31.

^{36/} See, e.g., *Nextel E911 Waiver Order* at ¶ 2.

^{37/} *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Order in Response to the Petition of the City of Richardson, Texas*, 16 FCC Rcd 18982 (2001) at ¶ 1 (reconsideration petitions pending).

^{38/} *Id.*

^{39/} *Id.*

Commission's decision, claiming that it forces wireless carriers to expend scarce resources on Phase II implementation before the PSAPs and their LECs have completed the ALI database upgrades necessary for the PSAPs to use the Phase II data.^{40/} Verizon Wireless has requested that the Commission, in response to the petitions, clarify that CMRS carriers will not be in violation of their Phase II obligations if, as of the deadlines, the relevant PSAPs cannot yet receive and use ALI data because they or their LECs have not completed the necessary upgrades of their facilities.^{41/}

- On April 29, 2002, the Commission imposed a number of requirements for non-service-initialized wireless telephones in order to address issues associated with the inability of a PSAP to call back a caller who dials 911 with a mobile phone that is not signed up for mobile service.^{42/} The Order set forth four requirements:
 - Donated non-service-initialized handsets and “911-only” phones must be programmed with the code 123-456-7890 as the telephone number so that PSAPs can identify non-service-initialized wireless calls.^{43/}
 - Carriers must complete any network programming necessary to deliver the 123-456-7890 phone number to PSAPs.^{44/}
 - Non-service-initialized handsets and “911-only” phones must be labeled to alert the user that the phone does not have callback capability.^{45/}
 - Education programs must be offered to the public to inform users of the limitations of non-initialized phones.^{46/}

This Order was stayed on September 30, 2002, pending the FCC's consideration of a petition for reconsideration filed by the Emergency Service Interconnection Forum, which sets forth an alternative plan for resolving the lack of call-back capability of non-service-initialized and 911-only handsets that was not addressed in the record.^{47/}

- On June 28, 2002, the Commission released an Order granting in part or in full requests to waive or extend the June 30, 2002 deadline requiring that all digital wireless service providers be capable of transmitting 911 calls made

^{40/} Sprint Petition for Reconsideration, CC Docket No. 94-102 (filed Nov. 30, 2001); Cingular Wireless Petition for Reconsideration, CC Docket No. 94-102 (Dec. 3, 2001).

^{41/} See *Ex Parte* Presentation of Verizon Wireless in CC Docket No. 94-102 (August 19, 2002).

^{42/} Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-Initialized Phones, *Report & Order*, 17 FCC Rcd 8481 (2002).

^{43/} *Id.* at ¶ 2.

^{44/} *Id.*

^{45/} *Id.*

^{46/} *Id.*

^{47/} Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Non-Initialized Phones, ____ FCC Rcd ____, DA 02-2423 (rel. Sept. 30, 2002).

using text telephone (“TTY”) devices.^{48/} The Order responded to two types of waiver and extension requests. The first type, filed principally by small carriers, cited vendor delays that prohibited companies from receiving the software and/or hardware upgrades necessary to meet the deadline.^{49/} The Commission granted most of these waiver requests, noting that they were for a relatively short period of time and resulted from circumstances that would have been difficult to avoid.^{50/} The second category of requests came from small, rural carriers providing CMRS using TDMA technology. These carriers sought complete waivers of the TTY requirement for their TDMA networks based on the fact that they had begun a migration away from TDMA towards other air interface technologies.^{51/} The Commission denied complete waivers to these providers, but granted a conditional extension until December 31, 2003.^{52/}

- On July 24, 2002, the Commission upheld the Wireless Bureau’s (“WTB” or “Bureau”) May 2001 decision that the 911 selective router is the demarcation point for allocating E911 implementation costs between wireless providers and PSAPs in situations where the parties cannot agree amongst themselves on a demarcation point.^{53/} The Order responded to a joint petition for reconsideration filed by Verizon Wireless, Voicestream Wireless Corporation, Qwest Wireless and Nextel, requesting the Commission to reconsider the Bureau’s decision and instead determine that the proper demarcation point is the output of the wireless carrier’s mobile switching center (“MSC”). The Commission rejected both the substantive and procedural arguments made by the joint petitioners, finding that the Bureau had properly concluded that the 911 selective router serves as the demarcation point based on the language of section 20.18(d) and the “nature and configuration of the existing network components used to provide wireless E911 service.”^{54/}
- On July 26, 2002, the Commission imposed a temporary stay of the Phase II implementation deadlines for two classes of non-nationwide CMRS providers. The Order stayed the E911 Phase II interim handset and network upgrade compliance deadlines by seven months for “Tier II” carriers and by thirteen months for “Tier III” carriers.^{55/} Tier II carriers were defined as regional

^{48/} Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Order*, 17 FCC Rcd 12084 (2002).

^{49/} *Id.* at ¶¶ 4-5.

^{50/} One exception is that the FCC denied AT&T Wireless (AWS) petition for relief to the extent that it relied solely on the date of the vendor’s delivery. Instead, the FCC granted AWS a waiver until September 30, 2002. *Id.*

^{51/} *Id.* at ¶ 12-13.

^{52/} *Id.* at ¶¶ 21-22.

^{53/} Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling System, Request of King County, Washington, *Order on Reconsideration*, ___ FCC Rcd, FCC 02-146 (rel. July 24, 2002).

^{54/} *Id.* at ¶ 8.

^{55/} Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers, *Order to Stay*, ___ FCC Rcd ___, FCC 02-210 (rel. July 26, 2002).

carriers with 500,000 or more subscribers as of December 2001 and Tier III carriers were defined as carriers with less than 500,000 subscribers as of December 2001.^{56/} The Commission stated that the relief granted to Tier I and Tier II carriers was similar to that granted to the nationwide carriers through adoption of their individual Phase II compliance plans.^{57/} The Commission noted, however, that the ultimate implementation deadline of December 31, 2005, the date upon which 95 percent of handsets in circulation would have to be ALI capable, remained the same.^{58/}

The Commission also took enforcement action with respect to wireless E911 obligations during the past 12 months. On May 2, 2002, the Commission approved a consent decree between itself and Cingular that terminated an inquiry into Cingular's compliance with E911 rules with respect to its TDMA, AMPS, and TDMA/AMPS networks.^{59/} The decree resolved all outstanding issues in relation to these networks and E911 compliance and set forth a deployment schedule for Phase II. In light of the consent decree, on May 20, 2002, the Commission dismissed as moot Cingular's earlier petition for waiver of E911 rules for the above-mentioned networks.^{60/}

On May 20, 2002 the Commission released a Notice of Apparent Liability for Forfeiture ("NALF") following an investigation into AT&T Wireless's implementation of E911 obligations with respect to its GSM network.^{61/} The Commission proposed a \$1.2 million fine for the following violations:

- Willfully and repeatedly violating Section 20.18(g)(1)(i) by failing to begin selling and activating location-capable handsets by October 1, 2000.
- Willfully and repeatedly violating Section 20.18(g)(2) by failing to implement any network or infrastructure upgrades necessary to supply E911 Phase II service and begin offering service within six months of a valid request by a PSAP or by October 21, 2001, whichever is later.
- Willfully and repeatedly violating Section 1.65 of the Commission's rules by not notifying the Commission within 30 days that facts contained in its E911 waiver request were no longer accurate or complete.
- Willfully and repeatedly violating the Commission's order granting AT&T Wireless a waiver of the E911 rules by failing to make a supplementary filing alerting the Commission that it was not going to comply with the deployment schedule set forth in the rules.

^{56/} *Id.* at ¶ 22.

^{57/} *Id.* at ¶ 10.

^{58/} *Id.* at ¶ 38.

^{59/} Cingular Wireless, LLC, File No. EB-02-TS-003, *Order*, 17 FCC Rcd 8529 (2002).

^{60/} Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Cingular Wireless LLC Request for Waiver of Section 20.18(f), *Order*, 17 FCC Rcd 9357 (2002).

^{61/} AT&T Wireless Services, Inc., *Notice of Apparent Liability for Forfeiture*, 17 FCC Rcd 9903 (2002).

D. Priority Access

In July 2000, the Commission, responding to a request from the National Communications System (“NCS”),^{62/} amended Part 64 of its rules to permit CMRS providers to voluntarily offer Priority Access Service (“PAS”) to national security and emergency preparedness (“NSEP”) personnel. Under the PAS rules, in emergencies authorized NSEP users may gain access to the next available wireless channel to originate a call, but the priority calls cannot preempt other calls in progress. In addition, the rules do not require CMRS providers to offer PAS or to adhere to particular technical standards in implementing PAS. Rather, carriers that elect to offer PAS must adhere to uniform operating protocols concerning both the number of priority levels overall and the priority level for particular NSEP users. Specifically, the PAS rules provide for five levels of priority and are triggered on a per call basis by dialing a feature code that is available to authorized NSEP users at all times.^{63/}

In the aftermath of September 11, 2001, NCS has undertaken efforts to implement wireless PAS on an expedited basis, noting that wireless technology played a key role in providing telecommunications for emergency workers in New York and at the Pentagon. T-Mobile USA, Inc. (formerly known as VoiceStream Wireless) (“T-Mobile”) responded to the NCS’s solicitation with a proposal to provide its wireless emergency service in the Washington, D.C., New York City, New York, and Salt Lake City, Utah markets and future additional markets. T-Mobile also submitted a petition to the Commission requesting the ability to offer its proposed wireless emergency service to NCS.^{64/} Specifically, T-Mobile requested authority to offer a PAS system that met all of the Commission’s requirements, except the requirement that each NSEP subscriber invoke or activate the priority access service on a per call basis. Because the proposed T-Mobile system would automatically invoke or activate the highest authorized precedence level each time the individual phone was used, it would not comply with the Commission’s rules and would require grant of a waiver.

In support of its waiver request, T-Mobile stated that priority access-capable handsets that would support the per call invocation feature were not commercially available, but that the company could provide the handsets in the U.S. by December 31, 2002. On April 3, 2002, the Commission granted T-Mobile a waiver until notification by the company or NCS that the per call invocation feature can be commercially deployed on T-Mobile’s GSM system, upon expiration or termination of the wireless PAS contract between T-Mobile and NCS, or by December 31, 2002, whichever is earliest.^{65/}

^{62/} The NCS is an organization created by Executive Order to administer and manage the telecommunications assets of 23 federal government organizations in serving the national security and emergency preparedness needs of the federal, state, and local governments. *See* Executive Order 12472, Assignment of National Security and Emergency Preparedness Telecommunications Functions, 49 Fed. Reg. 13471 (1984). The NCS acts on behalf of the Executive Office of the President.

^{63/} *See* 47 C.F.R. Part 64, Appendix B.

^{64/} VoiceStream Wireless Corp., Petition for Partial Waiver of Section 64.402 of the Commission’s Rules (filed Nov. 28, 2001).

^{65/} VoiceStream Wireless Corp., Petition for Waiver of Section 64.402 of the Commission’s Rules, *Memorandum Opinion & Order*, 17 FCC Rcd 6134 (2002).

E. Local Number Portability

In its latest wireless LNP decision, the Commission was required to balance the public benefits of its wireless LNP mandate against the financial and other burdens imposed thereby. Although the majority of the Commission attempted to avoid a direct discussion of the state of the capital markets, the issue nonetheless became a major focus of the proceeding as a result of Commissioner Abernathy's dissenting statement. Section 251(b) of the Communications Act of 1934, as amended ("the Act") requires local LECs to provide service provider LNP, to the extent technically feasible, in accordance with requirements prescribed by the Commission.^{66/} On July 2, 1996, the Commission released its *First Report & Order*, which promulgated rules and deployment schedules for the implementation of number portability.^{67/} Although CMRS carriers are not LECs, and thus were not expressly covered under Section 251(b), the Commission nonetheless required CMRS carriers to implement LNP. The Commission determined that implementation of LNP would enhance competition between these carriers, as well as promote competition between wireless and wireline carriers.^{68/} The Commission required cellular, broadband PCS, and covered specialized mobile radio ("SMR") carriers to have the capability to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998.^{69/} In addition, CMRS carriers were required to offer service provider LNP, including the ability to support roaming, throughout their networks by June 30, 1999.^{70/}

On September 1, 1998, the WTB granted a nine-month extension of the LNP requirement, reasoning that it was necessary to provide additional time for the wireless industry to develop and test standards in order to ensure efficient deployment of wireless LNP.^{71/} Later, on February 9, 1999, the Commission granted a second petition to extend the deadline, pursuant to its forbearance authority under Section 10 of the Act.^{72/}

The Commission's latest action extends the LNP deadline until November 24, 2003 to "allow adequate time to resolve all outstanding LNP implementation issues, including training personnel and other non-technical tasks, and critically, public safety coordination."^{73/} The decision reflected a compromise between the permanent forbearance requested by Verizon Wireless and other major CMRS carriers and the request by several state public utility commissions that the Commission require

^{66/} 47 U.S.C. § 251(b).

^{67/} Telephone Number Portability, *First Report & Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8352 (1996) ("*LNP First Report & Order*").

^{68/} *Id.* at 8434-36, ¶¶ 157-160.

^{69/} *Id.* at 8440, ¶ 165.

^{70/} *Id.* at 8440, ¶ 166.

^{71/} Cellular Telecommunications Industry Association's Petition for Extension of Telephone Number Portability Implementations Deadlines, *Memorandum Opinion & Order*, 13 FCC Rcd 16315, 16317, ¶7 (1998).

^{72/} Cellular Telecommunications Industry Association's Petition for Forbearance from Commercial Mobile Radio Services Number Portability Obligations, *Memorandum Opinion & Order*, 14 FCC Rcd 3092 (1999).

^{73/} Verizon Wireless's Petition for Partial Forbearance from the Commercial Mobile Radio Services Number Portability Obligation and Telephone Number Portability, *Memorandum Opinion & Order*, ____ FCC Rcd ____, FCC 02-215 (rel. July 26, 2002).

immediate implementation of LNP. In requesting permanent forbearance, Verizon Wireless, and most of the other CMRS carriers, argued that the benefits of wireless LNP do not outweigh the significant costs associated with implementation.^{74/} The state commissions, on the other hand, argued that wireless LNP was needed in order for wireless carriers to participate in thousands-block number pooling, a telephone number resource optimization method imposed by the Commission,^{75/} and to promote competition.^{76/}

Acknowledging the increasing importance of wireless in promoting local competition, the Commission ruled that permanent forbearance from the wireless LNP requirements would be inconsistent with the public interest.^{77/} In contrast to the view expressed in its 1999 forbearance decision, the Commission's most recent decision found that the consumer benefits of wireless LNP have become significant as more and more wireless subscribers have begun to view their wireless phone as a substitute for their wireline phone.^{78/} On the other hand, the Commission held that a limited extension would allow wireless carriers time to focus on the successful implementation of thousands-block number pooling and guard against any potential network disruptions that might result from simultaneous implementation of thousands-block number pooling and number porting.^{79/}

Commissioner Abernathy dissented from the Commission's wireless LNP decision. In her dissenting statement, she suggested that a lengthier extension of the LNP implementation deadline was warranted in view of the current condition of the capital markets. According to Commissioner Abernathy, "Capital is a zero sum game; resources spent on this mandate in a competitive market will have an impact on other products and services that benefit consumers, including price, coverage, innovation and other mandates such as E911. Moreover, mandates impose costs that sap the strength and viability of the wireless market."^{80/}

F. CALEA

The Commission was again forced to consider benefits versus costs in its recent CALEA^{81/} Remand decision. On April 11, 2002, the Commission released an Order on

^{74/} For example, Sprint estimated that implementation of LNP would cost it over \$86 million. Sprint Ex Parte in WT Docket No. 01-184, CC Docket No. 95-116.

^{75/} See, e.g., Comments of Michigan Commission; National Association of Regulatory Utility Commissions ("NARUC"); New Hampshire Commission in WT Docket No. 01-184; CC Docket No. 95-116.

^{76/} See, e.g., Comments of Maryland Commission in WT Docket No. 01-184, CC Docket No. 95-116.

^{77/} *Id.* at ¶¶ 17-18.

^{78/} *Id.*

^{79/} *Id.*

^{80/} *Id.* (dissenting statement of Commissioner Abernathy).

^{81/} Communications Assistance for Law Enforcement Act, Pub. L. No. 103-414, 108 stat. 4279 (1994) (codified as amended in scattered sections of 18 U.S.C. and 47 U.S.C. §§ 229, 1001-1010, 1021).

Remand.^{82/} The Order was intended to respond to a decision by the U.S. Court of Appeals for the District of Columbia Circuit^{83/} vacating four electronic surveillance capabilities that had been mandated by the Commission in its *Third Report and Order*,^{84/} pursuant to 47 U.S.C. § 1006(b). The four Commission-mandated electronic surveillance capabilities that had been vacated by the D.C. Circuit included: dialed digit extraction; party hold/join/drop messages; subject-initiated dialing and signaling information and in-band and out-of-band signaling information. In its decision, the court criticized the Commission for, among other things, not adequately explaining its conclusion that these capabilities constituted “call-identifying information” under the statute.^{85/}

In its *Remand Order*, the Commission, rejecting the position of most within the wireless industry, reaffirmed its original decision that the term “call-identifying information” included more than merely telephone numbers.^{86/} In explaining that decision the Commission stated:

The meaning of “call-identifying information” that we adopt should be tailored to replicate the existing electronic surveillance capability functions, but should also be expressed in sufficiently broad terms so as not to be limited to a specific network technology. This analysis is consistent with [the] overall purpose expressed for the Act: CALEA was intended to preserve the ability of law enforcement officials to conduct electronic surveillance effectively and efficiently in the face of rapid advances in telecommunications technology.^{87/}

Although the Commission emphasized that the term “call-identifying information” covered more than merely telephone numbers, it indicated that call content information such as bank account numbers, prescription numbers and pass codes do not constitute “call-identifying information” because they do not identify the origin, direction, destination or termination of a communication covered under CALEA.^{88/}

^{82/} See In the Matter of Communications Assistance for Law Enforcement Act, Order on Remand, cc Docket No. 97-213 (rel. April 11, 2002).

^{83/} *United States Telecommunications Association v. FCC*, 227 F.3d 450 (D.C. Cir. 2000).

^{84/} Communications Assistance for Law Enforcement Act, *Third Report and Order*, CC Docket No. 97-213, 14 FCC Rcd 16794 (1999).

^{85/} *USTA v. FCC*, 227 F.3d at 459. The D.C. Circuit concluded that the Commission had not explained the basis for its conclusion that the electronic surveillance capabilities constituted “call-identifying information” under CALEA because it did not explain how the key statutory terms used in the definition – origin, direction, destination and termination – could be interpreted to cover the four capabilities at issue. *Id.* The Court also held that the Commission had not identified any deficiencies in the manner in which the standard the industry developed to implement CALEA, J-STD-025, interpreted key terms contained in the CALEA statute. *Id.* at 460-461. The court also stated that the Commission had failed to explain how the four capabilities would satisfy CALEA’s Section 103 requirements by “cost-effective methods.” *Id.* at 461. Finally, the Court found that the Commission had failed to explain how the post-cut-through dialed digits requirement would protect the privacy and security of communications not authorized to be intercepted. *Id.* at 462-463.

^{86/} CALEA *Remand Order* at ¶ 30.

^{87/} *Id.* at ¶ 33.

^{88/} *Id.* at ¶ 7.

With respect to its obligation to consider whether the four electronic surveillance capabilities could be provided in a cost-effective manner, the Commission concluded that DOJ/FBI buyout agreements with equipment manufacturers (which, according to DOJ/FBI, cover over 90 percent of the switches requiring CALEA upgrades) will serve to reduce the overall costs borne by carriers and passed through to their customers.^{89/} The Commission also pointed out that the FBI’s flexible deployment program allows carriers, in many instances, to deploy CALEA-compliant software over the course of regularly-scheduled upgrades, thereby further minimizing costs.^{90/} In addition, the Commission noted that CALEA allows common carriers to petition the Commission to adjust charges to recover costs associated with CALEA compliance, providing another protection against unreasonable costs.^{91/} Finally, the Commission indicated that if carriers believe CALEA implementation costs are too high, they may seek a determination from the Commission that a particular capability is not “reasonably achievable” under section 103(a)(2).^{92/}

Because the Commission’s dialed digit extraction requirement obligates carriers to provide law enforcement personnel with access to post-cut-through digits that might constitute call content, and it is currently not possible technically to separate call content information from call-identifying information, the Commission considered whether the dialed digit extraction requirement was consistent with its obligation, pursuant to section 107(b)(2) of CALEA, to protect the privacy and security of communications or information not authorized to be intercepted. In the *Remand Order* the Commission reiterated the view expressed in its original order that law enforcement personnel seeking access to such information must seek and obtain the necessary authorization from a court to conduct surveillance. In the Commission’s view, this fact satisfied its statutory obligations^{93/} under section 107(b)(2).^{94/} Citing privacy concerns, the Commission also held that carriers must have equipment and software to support a dialed digit extraction capability with a toggle feature that allows it to be turned off where its operation cannot be legally supported. The Commission provided that if such a toggle feature is not

^{89/} See *id.* at ¶ 64.

^{90/} *Id.*

^{91/} *Id.*

^{92/} *Id.*

^{93/} *Id.* at ¶ 89.

^{94/} According to the Commission:

[I]f a court determines that a pen register is insufficient to obtain post-cut-through digits because of content information contained in the communication, the court will have determined that a LEA is not authorized to obtain the information obtained by dialed digit extraction and a carrier must be able to exclude dialed digit extraction when it is presented with that pen register order. If, on the other hand, a court determines that a pen register order is sufficient for a LEA to obtain dialed digit extraction information in a particular case, then the carrier would be expected to comply with such an order. By providing for a dialed digit extraction capability but not assuming that it will be legally available to LEAs in all circumstances, we will protect the privacy of the communication that a LEA is not authorized to obtain. In doing so, however, we will not prejudice the role of a court to frame what, in a particular situation, constitutes the exact communication that a LEA is authorized and not authorized to obtain.

Id. at ¶ 89.

available from a carrier's vendor by the Commission's compliance deadline, the carrier may file a petition with the Commission requesting an extension.^{95/}

II. Spectrum Allocation and New Technology Matters

Several spectrum allocation and new technology proceedings over the past twelve months brought into sharp focus the need for a more coherent Commission spectrum policy. These proceedings, which often pitted incumbent licensees providing popular consumer services against new entrants, highlighted several tensions that have developed out of the Commission's attempt to apply general principles of spectrum management^{96/} across a wide range of services. Although the proceedings ostensibly were about identifying the operational limitations that would be necessary to prevent new entrants from causing harmful interference to incumbent services, the subtext involved much more fundamental spectrum policy questions. The UWB proceeding, for example, highlighted the tension between the concept of quasi-property rights in spectrum on the one hand, and the goal of spectrum efficiency on the other. UWB proponents claimed they could operate on spectrum currently licensed to other users without causing harmful interference, and therefore use the spectrum more efficiently. Incumbent licensees disagreed on the issue of harmful interference, but some, especially those that had acquired their licenses at auction, asserted a quasi-property right to be free from additional inband interference.^{97/} Similar issues arose in the Ku Band Sharing proceeding, where DBS providers urged the Commission not to license a new, potentially competitive MVDDS service on spectrum licensed to DBS providers because the new service would inevitably degrade DBS.^{98/}

Another point of tension was highlighted by the Commission's decision to grant MMDS and ITFS licensees a mobile allocation on their licensed spectrum, and the request by some Mobile Satellite Service ("MSS") providers for the flexibility to offer an ancillary terrestrial component. Proceedings such as these require the Commission to determine the point at which use flexibility, a key plank of its spectrum policy,^{99/} begins to undermine its ability to ensure that spectrum gets into the hands of those most capable of putting it to its highest and best uses. The overarching question posed in the two proceedings is whether, in granting use flexibility to incumbent licensees that initially acquired their spectrum under a more restrictive set of rules, the Commission would be providing an unfair "windfall" to those incumbents, and encouraging regulatory arbitrage that could eventually undermine its auctions program.

^{95/} *Id.* at ¶ 90.

^{96/} See Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications for the New Millennium, FCC 99-354, *Policy Statement*, 14 FCC Rcd 19868, 19870 (1999) ("Spectrum Policy Statement").

^{97/} Cf. Sprint Petition for Reconsideration in ET. Docket No. 98-153 at 4-8 (filed June 17, 2002).

^{98/} See, e.g., EchoStar Petition for Reconsideration in ET Docket No. 98-206.

^{99/} See *Spectrum Policy Statement* at ¶ 9 ("Flexible allocations may result in more efficient spectrum markets").

The past twelve months also saw the Commission grapple with more traditional spectrum management issues. For example, the Commission and National Telecommunications and Information Administration (“NTIA”) continued the work they started following WRC-2000 to allocate additional spectrum below 3 GHz for 3G services. Because much of the spectrum under review is used by the military, the bulk of this year’s activity centered on identifying the spectrum that can most easily be reallocated without causing disruption to military operations. The Commission also opened a proceeding to consider alternatives for realigning the 800 MHz band to avoid harmful interference to public safety operations.

It was perhaps because of these complex and contentious proceedings that Chairman Powell established the cross-bureau Spectrum Policy Task Force (“SPTF”) on June 6, 2002. The SPTF has sought public comment on a wide range of spectrum policy issues^{100/} and conducted several public workshops in an effort to develop recommendations for achieving a more market-oriented spectrum policy. In the section below we will discuss these developments in more detail and some of the implications of the Commission’s recent decisions and deliberations.

A. Ultra-Wideband

On April 22, 2002 the Commission released a First Report & Order (“UWB Report & Order”) amending Part 15 of its rules to permit the marketing and use of UWB technology.^{101/} UWB products typically utilize very narrow or short duration pulses that create wide-band transmissions.^{102/} Potential UWB applications include short range, high data rate communications, including peer-to-peer communications, imaging devices, ground penetrating radar and vehicle-based collision avoidance radar. The Commission’s UWB decision culminated a four and a half year process during which the Commission, in coordination with NTIA,^{103/} reviewed the potential impact of UWB on several government and commercial radio systems.

^{100/} See *Spectrum Policy Task Force Seeks Public Comments on Issues Related to Commission’s Spectrum Policies*, Public Notice, ET Docket 02-135 (rel. June 6, 2002).

^{101/} In the Matter of Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems, *First Report and Order*, ET Docket No. 98-153 (rel. April 22, 2002) (“*UWB Report & Order*”).

^{102/} “UWB radio systems typically employ pulse modulation where extremely narrow (short) bursts of RF energy are modulated and emitted to convey information. Because of the very short duration of these pulses, the emission bandwidths from these systems are large and often exceed one gigahertz.” In the Matter of Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems, *First Report and Order*, ET Docket No. 98-153, rel. April 22, 2002 *UWB Report & Order* at ¶ 5.

^{103/} NTIA studied the potential for harmful interference to federal systems such as the Global Positioning Satellite System, Search and Rescue Satellite System, Air Traffic Control System and Meteorological Radar System and Earth Exploration Satellite System, to name a few. See NTIA Special Publication 01-43, *Assessment of Compatibility between Ultra-wideband Devices and Selected Federal Systems*, January 2001, NTIA Report 01-383, *The Temporal and Spectral Characteristics of Ultra-wideband Signals*, January 2001; NTIA Special Publication 01-45, *Assessment of Compatibility between Ultra-wideband (UWB) Systems and Global Positioning System Receivers*, February 2001; *Measurements to Determine Potential Interference to GPS Receivers from Ultra-wideband Transmission Systems*, February 2001.

In June 2000, the Commission released a NPRM in the UWB proceeding to permit the use of UWB devices under Part 15, and requested comment on a wide range of issues relating to UWB operations.^{104/} Most notable among the questions posed by the Commission was: (1) whether, and under what circumstances, UWB devices could be permitted to emit intentionally into safety-of-life and passive service bands previously protected from intentional emissions under section 15.205 of the Commission's rules;^{105/} (2) the power limits that should be imposed on UWB transmitters and (3) the procedures that should be employed to measure the emissions of UWB devices.^{106/} After the initial comment cycle closed, the Commission sought additional comment on reports issued by NTIA and other federal agencies regarding UWB's potential to interfere with certain government operations.^{107/}

The Commission's *UWB Report & Order* acknowledged that opinion varies on the emission levels necessary to avoid harmful frequency interference to safety-of-life, and commercial radio systems.^{108/} Referring to this uncertainty, Commissioner Copps characterized the Commission's approach as "ultra-conservative."^{109/} Noting that the standards developed were potentially stricter than needed, the Commission indicated that a Further Notice would be released within six to twelve months of the decision exploring whether more flexible regulations would be appropriate.^{110/}

The *UWB Report & Order* created technical standards and operating restrictions for three distinct categories of UWB products: (1) imaging systems,^{111/} (2) vehicular radar^{112/} and (3) communications and measurement systems.^{113/} The emissions and

^{104/} See In the Matter of Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, *Notice of Proposed Rulemaking*, ET Docket 98-153 (rel. June 14, 2000).

^{105/} *Id.* at ¶¶ 22-30.

^{106/} *Id.* at ¶¶ 48-55.

^{107/} See Comment Requested on Test Data Submitted by the National Telecommunications and Information Administration Regarding Potential Interference from Ultra-Wideband Transmission Systems, DA01-171 (rel. January 24, 2001).

^{108/} *UWB Report & Order* at ¶ 2.

^{109/} *Id.* (Separate Statement of Commissioner Michael J. Copps).

^{110/} *UWB Report & Order* at ¶ 1.

^{111/} The *UWB Report & Order* provides that all UWB imaging systems are subject to coordination with NTIA and requires that operators of imaging devices be eligible for licensing under Part 90 of the rules, except that medical imaging devices may be used by a licensed health care practitioner. *Id.* at ¶ 5. The Order requires that ground penetrating radars and wall imaging systems operate below 960 MHz or in the frequency band 3.1-10.6 GHz. *Id.* Operation of both devices is limited to law enforcement, fire and rescue organizations, scientific research institutions, commercial mining companies and construction companies. *Id.* Through-wall imaging systems have slightly different requirements. These systems must be operated below 960 MHz or in the frequency band 1.99-10.6 GHz. *Id.* Additional regulated UWB imaging systems include surveillance and medical systems. Surveillance systems create security fences by establishing a stationary RF perimeter field that detects intruding persons or objects. *Id.* They are permitted to operate in the frequency band 1.99-10.6 GHz and use is limited to law enforcement, fire and rescue organizations, public utilities and industrial entities. *Id.* Medical systems, defined as systems that enable their operators to look inside the body of a person or animal, must be operated in the frequency band 3.1-10.6 GHz. *Id.* UWB Medical Systems must be operated by, or under the supervision of, a licensed health care practitioner. *Id.*

^{112/} Vehicular radar systems detect the location and movement of objects near a vehicle, creating the ability to avoid collisions, as well as improve airbag activation and automotive suspension systems. The *UWB Report & Order* permits the operation of vehicular radar devices whose -10 dB bandwidths fall

operational limits adopted for the products are significantly more stringent than those imposed for other unlicensed devices.^{114/} Moreover, the Commission limited each class of UWB device to a specific frequency band.^{115/} The Commission indicated its belief that this combination of technical and operational limitations would ensure that the UWB devices would not cause harmful interference to existing services.^{116/} Several parties have filed petitions for reconsideration of the *UWB Report & Order* on both sides of the UWB debate.^{117/}

B. Ku-Band Sharing Order

During the past twelve months, the Commission, in response to petitions for reconsideration, affirmed its prior decision to allow new fixed terrestrial services under the existing allocation for fixed service in the 12 GHz band.^{118/} The petitioning DBS providers sought reconsideration of a December 2000 order authorizing access for the new Multichannel Video Distribution and Data Service (“MVDDS”) under the existing primary status fixed service allocation in the 12 GHz band. The Commission rejected their petition, concluding that the MVDDS allocation was “in the public interest and reflects a carefully crafted balance of technical and policy concerns.”^{119/}

The DBS providers claimed that the authorization of MVDDS under the existing allocation for fixed service in the 12 GHz band, along with the presence of new non-geostationary satellite orbit (NGSO) fixed-satellite services (FSS) approved in the prior Order, would increase the level of DBS unavailability and, therefore, was unwarranted. The Commission concluded, however, that the adoption of technical rules and regulatory

within the 22-29 GHz band, provided the center frequency of the emission and the frequency at which the highest radiated emission occurs are greater than 24.075 GHz. *See* 47 C.F.R. § 15.515. The Commission’s rules also allow UWB vehicular radars to operate at an average emission limit of -41.3 EIRP. *Id.* However, emissions in the 23.6-24.0 GHz band appearing 30 degrees or above the horizontal plane must be attenuated to avoid causing harmful interference to passive EESS operations in the band. *Id.* The Commission required that the attenuation levels increase over time, consistent with the expected level of deployment of automobiles equipped with the devices. Emissions at elevation angles above 30 degrees from devices manufactured and sold after January 2005, 2010 and 2014 must be attenuated 25 dB, 30 dB and 35 dB respectively. *Id.*

^{113/} The Commission promulgated separate rules for indoor-only and hand-held UWB communications systems. Communication systems capable of operating indoors only may operate at an average emissions level of -41.3 dB EIRP between 3.1 and 10.6 GHz. Attenuation of the emissions is required at various levels from 3.1 GHz down to 1.61 GHz. *See* C.F.R. §15.517. Handheld communications devices may also operate at -41.3 dB EIRP between 3.1 and 10.6 GHz. Their emissions must be attenuated to a greater degree from 3.1 GHz down to 1.61 GHz. *See* 47 C.F.R. §15.519.

^{114/} *UWB Report & Order* at ¶ 5.

^{115/} *Id.*

^{116/} *Id.*

^{117/} *See, e.g.,* Petitions for Reconsideration in ET Docket No. 98-153 of Sprint PCS (filed June 17, 2002); Aeronautical Radio, Inc. and Air Transportation Association of America, Inc. (filed June 17, 2002); Cingular Wireless (filed June 17, 2002); Time Domain (filed June 17, 2002); Multispectral Solutions, Inc. (“MSSI”) (filed June 14, 2002); Ground Penetrating Radar Industry Coalition (filed June 17, 2002).

^{118/} *See* Amendments of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GO and Terrestrial Systems in the Ku-Band Frequency Range, *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9614 (2002).

^{119/} *Id.* at 9617, ¶ 2.

safeguards would be sufficient to protect the primary allocation status of the incumbent DBS operations. The Commission found that its MVDDS regulations would limit the amount of increased DBS unavailability due to the presence of MVDDS to a negligible level over a baseline level of unavailability and, therefore would ensure that MVDDS operations not cause harmful interference.^{120/}

EchoStar argued that in designing their systems, DBS providers had relied upon the reasonable expectation that the Commission would provide a certain level of interference protection, and that this protection had been undermined by the MVDDS decision. The Commission disposed of the petitioner's rights and reliance argument by relying upon its finding that under the rules developed in the new Order, MVDDS operations will not cause harmful interference to DBS service. The Commission decided that the harm caused by the "relatively small theoretical changes" experienced by DBS customers would not rise to the level of "harmful interference" under its rules and was outweighed by the benefits of adding the new services and capabilities.^{121/}

C. ITFS/MMDS Order

In September 2001, the Commission rendered a decision removing the 2500-2690 MHz band from consideration as a possible candidate band for new 3G services. In issuing the decision, however, the Commission added a mobile allocation for the benefit of ITFS/MMDS licensees.^{122/} The mobile allocation was requested by the Ad Hoc MDS Alliance ("MDS Alliance"), which argued that the additional service option "would ensure maximum flexibility in bringing advanced 3G-type service to the public."^{123/} The Commission, with Commissioners Tristani and Copps dissenting, found that the additional allocation was in the public interest because flexible use enables more efficient spectrum markets.^{124/} The Commission noted that its decision to add the mobile allocation was the fourth time it had acted to provide flexibility to ITFS/MMDS licensees, following earlier orders that expanded protected service contour areas, permitted digital modulation schemes and authorized two-way voice and data services.^{125/}

^{120/} *Id.* at 9628, ¶ 32.

^{121/} In the *Second Report & Order* portion of the decision, the Commission implemented site and design requirements for transmitting antennas, set a maximum power limit per operator and specified an equivalent power flux density limit for each of the four regions of the United States. *Id.* at ¶¶ 53-94.

^{122/} Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support Introduction of New Advanced Wireless Services, *First Report and Order and Memorandum Opinion and Order*, 16 FCC Rcd 17222 (2001) ("*ITFS/MMDS Order*").

^{123/} *Id.* at ¶ 18. Moreover, the Ad Hoc MDS Alliance asserted that its proposal would serve the public faster and more efficiently than reforming the band, because existing licensees could evolve new services under existing business relationships. Interestingly, in its decision the Commission declined to propose service rules for mobile service, committing to explore the issue in a future proceeding. *Id.* at ¶ 30.

^{124/} In a joint statement, Commissioners Tristani and Copps stated their view that the flexible allocation was a "rush to judgment not supported by evidence in the record." *Id.* (Joint Statement of Commissioners Gloria Tristani and Michael J. Copps).

^{125/} *Id.* at ¶ 21.

Dismissing objections raised by AT&T Wireless that a mobile allocation would provide a windfall to incumbent ITFS/MMDS licensees, the Commission stated that the allocation:

simply allows incumbent licensees an additional option, but it is entirely possible that fixed use of the band will continue to predominate. . . . [A]lthough incumbents may enjoy some benefits by adding a mobile allocation to the band, permitting mobile use of the band by new service providers would pose a very high risk of disrupting important incumbent fixed operations that our decision does not pose.^{126/}

Because the Commission's decision in the *ITFS/MMDS Order* appears to have been based on the conclusion that new entrants would pose a very high risk of disrupting incumbent operations in the band, the potential for harmful interference to incumbent services will likely be a key issue in future proceedings in which the Commission determines whether and, if so how, to expand use flexibility for previously licensed services.

D. MSS ATC Proceeding

In August 2001 the Commission adopted a NPRM seeking comment on proposals to allow terrestrially based services to be provided over spectrum currently allocated to the Mobile Satellite Service ("MSS").^{127/} The NPRM focused on two proposals: (1) New ICO and Motient's requests that existing MSS licensees be allowed the flexibility to offer an ancillary terrestrial component over their MSS spectrum; and (2) the proposal, backed by many terrestrial providers, that a portion of the MSS spectrum be made available for terrestrial use by any party, MSS provider or not, and that such terrestrial rights be assigned via auction.^{128/}

The NPRM sought to address the technical and statutory interpretation issues raised by the competing proposals. The primary technical issue raised in the NPRM was whether it is possible to "sever" terrestrial services from satellite services within the same MSS frequency band, such that the terrestrial and satellite services can be provided by different operators using independent networks.^{129/} MSS licensees and terrestrial providers generally disagree on the answer. MSS licensees assert that single operator networks will be the only networks capable of coordinating terrestrial and satellite

^{126/} *Id.* at ¶ 27.

^{127/} See In the Matter of Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, L Band, and the 1.6/2.4 GHz Band, *Notice of Proposed Rulemaking*, IB Docket No. 01-185 (rel. August 17, 2001) ("MSS Flexibility NPRM").

^{128/} *Id.* at ¶¶ 29-38.

^{129/} The Commission's International Bureau, apparently believing that initial comments did not adequately address the technical questions, issued a separate public notice on March 6, 2002, requesting additional technical submissions on the topic. See Commission Staff Invites Comment on Certain Proposal to Permit Flexibility In the Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, L-Band, and the 1.6/2.4 GHz Band, *Public Notice* in IB Docket No. 01-185, DA 02-554 (rel. March 15, 2002).

services offered in the same band.^{130/} Terrestrial service providers claim, by contrast, that operating independent networks using MSS spectrum is technically feasible by segmenting the current MSS spectrum into separate frequency bands.^{131/}

Two statutory interpretation questions were raised in the NPRM: (1) would providing for flexible use of MSS spectrum be consistent with section 303(y) of the Communications Act?^{132/}; and (2) what effect, if any, does the Open-Market Reorganization for the Betterment of International Telecommunications Act (the “ORBIT Act”) have on the Commission’s ability to auction the spectrum, pursuant to section 309(j) of the Act.^{133/}

Since the formal comment cycle for the proceeding has closed, some trade publications have suggested that the Commission is considering how to craft incentives that would encourage existing MSS licensees to voluntarily vacate their spectrum so that it could be auctioned for flexible use. According to these sources, Commission staff are working on an arrangement that would allow the spectrum to be used for terrestrial as well as satellite-based services, and provide an incentive (in the form of a transferable bidding voucher or credit that could be used in an auction of the MSS spectrum or a subsequent auction) for existing MSS licensees to turn in the spectrum.^{134/} Some action (possibly a decision on some issues and a further notice) is expected by the end of 2002. Past decisions demonstrate the Commission’s willingness to support flexible spectrum use. In recent years the Commission has modified its rules pertaining to cellular, MMDS, IVDS and PCS in order to allow licensees the flexibility to respond better to the needs of

^{130/} See, e.g., Supplemental Comments of ICO Global Communications in IB Docket 01-185 (filed March 22, 2002).

^{131/} See, e.g., Comments of Verizon Wireless in IB Docket No. 01-185 (filed March 22, 2002).

^{132/} Section 303(y) allows the Commission to permit flexible use of particular spectrum bands if the Commission determines that such use is: (1) consistent with international agreements; (2) is in the public interest; (3) would not deter investment in communications systems or technologies and (4) would not result in harmful interference among users. Arguments have focused on the public interest element. MSS licensees argue that a flexible allocation would better promote service to rural customers. Terrestrial carriers argue, on the other hand, that the Commission’s public interest goals for efficient spectrum use would best be accomplished by allowing terrestrial services to be provided over the MSS spectrum and holding an auction to ensure that the spectrum gets into the hands of those most capable of putting its highest and best use.

^{133/} Section 647 of the ORBIT Act bars the Commission from “assign[ing] by competitive bidding . . . spectrum used for the provision of international or global satellite services.” 47 U.S.C. § 765(f). MSS licensees argue that even if the Commission approves a terrestrial component, “it will not change the fact that this spectrum is used for global satellite communications and is, therefore, not auctionable.” Reply Comments of New ICO (Nov. 13, 2001) at 13. See also Reply Comments of the Unofficial Bondholders Committee of Globalstar L.P. (Nov. 13, 2001) at 33034. Terrestrial carriers respond that the ORBIT Act has no relevance when the spectrum is actually used for terrestrial service, regardless of whether this service shares spectrum with satellite communications. AT&T Wireless and other terrestrial carriers noted that the FCC “has repeatedly auctioned or commenced auction proceedings for dual use spectrum” and in its 2000 Ku Band decision, the Commission explicitly determined that “the ORBIT Act is not a bar to auctioning licenses merely because the terrestrial service operates on the same frequencies as a satellite service.” Reply Comments of AT&T Wireless Services, Inc. (Nov. 13, 2001) (citing Amendment of Parts 2, and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, *First Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 4096 at ¶ 326 (2000)).

^{134/} See, e.g., Paul Kirby, “CTIA, AT&T Wireless Urge FCC to Reallocate MSS Spectrum,” *Telecommunications Reports* (September 20, 2002).

the marketplace. On the other hand, with the exception of cellular service providers, most of the commercial licensees that have benefited from these policies acquired their spectrum through auctions. In this case, the MSS spectrum was not assigned by auction. Accordingly, the Commission may be reluctant to establish a precedent that is perceived as providing a windfall to those licensees.

E. Spectrum Policy Proceeding

In June 2002, Chairman Powell announced the formation of a Spectrum Policy Task Force (“SPTF” or “Task Force”).^{135/} The SPTF is a cross-bureau entity comprised of senior level attorneys, engineers and economists from several of the Commission’s bureaus and offices. It was formed to assist the Commission in identifying reforms in spectrum policy that will increase the public benefits derived from the uses of radio spectrum.^{136/} The Task Force was given two functions: (1) to recommend steps that could be taken to facilitate a more integrated, market-oriented approach to spectrum management that provides greater regulatory certainty, while minimizing regulatory intervention;^{137/} and (2) to assist the Commission in addressing issues such as interference protection, spectral efficiency, effective public safety communications, and international spectrum issues.^{138/}

In June 2002, the SPTF issued a Public Notice commencing a review of the Commission’s existing spectrum policies. The Public Notice stated that the SPTF would submit a report with recommendations to the Commission by October 2002, based on the public comments received and public workshops conducted by SPTF.^{139/} In response to the Public Notice, the Task Force received comments from a wide range of entities and individuals, including representatives of the wireless industry, academia, consumer groups and government. These comments reflected divergent views on the Commission’s spectrum management function. Several commenters representing unlicensed spectrum users urged the Commission to allocate additional spectrum for unlicensed, flexible use.^{140/} While most licensed users also supported use flexibility for initial spectrum allocations, many urged the Commission to refrain from granting use

^{135/} See *FCC Chairman Michael K. Powell Announces Formation of Spectrum Policy Task Force*, FCC News Release, June 6, 2002, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-223142A1.pdf.

^{136/} *Id.*

^{137/} *Mission of Spectrum Policy Task Force* (found at <http://www.fcc.gov/sptf/>).

^{138/} *Id.*

^{139/} See *Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission’s Spectrum Policies*, *FCC Public Notice*, June 6, 2002. In the Notice, the Task Force solicited comments evaluating the effectiveness of the FCC’s two policy approaches to facilitate optimal spectrum use—granting existing licensees additional flexibility and reallocating bands for flexible use - and their applicability across different bands with different incumbents’ rights. *Id.* at 2. The Task Force also requested suggestions regarding the standard that should be applied for determining the level of acceptable interference between radio systems and suggestions for policies to provide protection against harmful interference. *Id.* at 4. In addition, the Task Force solicited policy suggestions for promoting and measuring spectral efficiency and for preserving the ability of public safety, public service and critical infrastructure entities to provide information in light of the increasing demand for spectrum. *Id.* at 5. Lastly, the Task Force solicited comments on whether and how the FCC should coordinate spectrum policy regionally within the Western Hemisphere and internationally. *Id.* at 6.

^{140/} See, e.g., *Ex Parte* Presentation of Consumer Electronics Association in ET Docket No. 02-135 (filed September 30, 2002).

flexibility in situations where doing so would provide a windfall, and unfair competitive advantage, to carriers that did not secure their spectrum at auction.^{141/} The SPTF's workshops covered a variety of topics, including experimental licenses and unlicensed spectrum, interference protection, spectrum efficiency and spectrum rights and responsibilities.^{142/}

F. 3G Rulemaking

Over the past year the Commission and NTIA have continued to work toward an additional allocation of spectrum for IMT-2000 or "3G". IMT-2000 or "3G" generally refers to mobile services that achieve data rates of at least 144 kilobits per second in high mobility traffic; 384 kilobits per second for pedestrian traffic and 2 Megabits per second for indoor traffic.^{143/}

At the International Telecommunications Union's ("ITU") 2000 World Radio Conference ("WRC-2000"), the ITU determined that additional spectrum beyond the amount allocated at WRC-92^{144/} for 3G would be needed to satisfy future demand for 3G services in high traffic areas around the world.^{145/} In December 2000, a few months after WRC-2000, the Commission issued an NPRM seeking comment on the frequency bands identified at WRC-2000.^{146/} As part of the proceeding, the Commission tentatively concluded that spectrum transferred from government use by Congress at 1710-1755 MHz, and commercial spectrum at 2110-2150 MHz and 2160-2165 MHz, should be reallocated for fixed and mobile use, including 3G.^{147/} In addition, the Commission sought comment on the appropriateness of reallocating spectrum held by the government (mainly the military) at 1755-1850 MHz, and spectrum allocated to MMDS and ITFS at 2500-2690 MHz.^{148/} At the same time, the Commission and NTIA committed respectively to study the feasibility of relocating incumbents from the MMDS/ITFS and government bands.

Of the several frequency bands identified in the Commission's NPRM, the U.S. this year focused its attention on 1710-1755 MHz and 2110-2170 MHz. NTIA, in a

^{141/} See, e.g., Reply Comments of Verizon Wireless in ET Docket No. 02-135 at 11-12 (filed July 23, 2002).

^{142/} See Spectrum Policy Task Force Announces Public Workshops on Issues Related to Commission Spectrum Policies, ET Docket 02-135, DA 02-1643 (rel. July 10, 2002).

^{143/} *Definition of 3G System Capabilities*, available at <http://www.fcc.gov/3G/>.

^{144/} The International Telecommunications Union ("ITU") initially effected an international allocation for IMT-2000 or 3G systems at WRC-92. Some national jurisdictions, especially in Europe, have already assigned 3G spectrum based on that allocation. The U.S. used some of the spectrum provided in the WRC-92 allocation for the Personal Communications Service ("PCS"). The ITU's WRC-2000 decision makes it possible for ITU members to allocate additional spectrum for IMT-2000 or 3G.

^{145/} See Provisional Final Acts of the World Radiocommunication Conference (Istanbul, WRC-2000).

^{146/} In the Matter of Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, *Notice of Proposed Rulemaking and Order*, ET Docket No. 00-258 (rel. January 5, 2001).

^{147/} *Id.* at ¶ 32.

^{148/} *Id.*

widely circulated July 2002 report, identified those bands as the most appropriate new spectrum bands for 3G, ruling out for the time being additional spectrum in the 1755-1850 MHz range currently used by the government.^{149/} While the NTIA report acknowledged that the commercial wireless industry's need for spectrum is increasing rapidly, it stated that the needs of the Department of Defense ("DOD") are also increasing, noting that in recent years the DOD's use of spectrum has grown significantly because of its participation in a number of operations throughout the world, including Eastern Europe, Middle East, Afghanistan and the U.S.^{150/}

The NTIA report concluded that the 1710-1755 MHz band can be allocated for 3G services without disrupting vital government communications systems.^{151/} The report made clear, however, that in order for the spectrum to be reallocated, it will be necessary to relocate several federal communications systems operating in the band, including 16 protected DOD sites.^{152/}

NTIA's report also concluded that the 1755-1770 MHz band is not available at this time for 3G, indicating that commercial use of the band would impose unacceptable limitations on DOD operations.^{153/} According to NTIA, there is limited potential for sharing between commercial wireless and DOD systems, or relocation of government systems, because of technical obstacles, the unavailability of alternate bands for government operations, prohibitive costs and the Government's increasing need for spectrum.^{154/}

By contrast, the NTIA report suggested that it would be relatively easy to reallocate at least 45 MHz of spectrum from the 2110-2170 MHz band for 3G.^{155/} 2110-2170 MHz is currently used by the private sector for common carrier, multi-point distribution, paging, radiotelephone, local TV, private point-to-point and mobile satellite services.^{156/} Its status as a commercial band means that the Commission, not NTIA, has primary authority over its use.

^{149/} An Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands, *NTIA Report*, July 2002, at 4 n.7.

^{150/} *Id.* at 1.

^{151/} *Id.*

^{152/} *Id.* To facilitate the reallocation, NTIA indicated that private sector entities receiving the spectrum via auction would have to pay the costs of relocating or modifying the federal systems. *Id.* at 2. Under the NTIA plan, federal agencies would be required to relocate non-military systems and the DOD would be required to relocate its conventional fixed microwave systems within two years after reimbursement. Other DOD communications systems, including operations at 16 protected DOD sites, would be relocated by December 2008. The Commission would initiate the rulemaking proceeding or proceedings necessary to facilitate this relocation. *See id.* at 2-3.

^{153/} *See id.* at 3.

^{154/} *Id.* at 3.

^{155/} *Id.* at 3.

^{156/} *Id.*

Soon after release of the NTIA report, the Commission issued a public notice seeking comment on the report.^{157/} While a number of commenters lauded NTIA for taking the steps necessary to make at least 90 MHz of additional spectrum available for 3G,^{158/} some questioned NTIA's finding that 1755-1770 MHz could not be made available for nongovernmental use.^{159/} These commenters urged the Commission, in its deliberations, to scrutinize NTIA's findings with respect to 1755-1770 MHz, and indicated that far more than 90 MHz would be needed to satisfy current needs for mobile services and facilitate the rollout of 3G services.

We expect the Commission to issue an Order in the 3G allocation proceeding by the end of this year. Based on NTIA's findings, it is likely to conclude that 1710-1755 MHz and some portion of 2110-2170 MHz can be made available for 3G. To the extent the Commission decides to reallocate spectrum in the 2150-2170 MHz band, it will be necessary to accommodate MMDS licensees that currently occupy spectrum at 2150-2162 MHz. Several possible substitute frequency bands have been discussed, but no consensus has emerged on the issue.

G. 800 MHz Proceeding

Public safety officials such as police, fire and emergency personnel rely on radio communications in responding to emergencies. For optimal use, their radio communications must be free from harmful interference.^{160/} Since the 1980s, the FCC has allowed public safety officials to operate on interleaved spectrum at 809.75-816 MHz and 854.75-861 MHz, which is adjacent to Specialized Mobile Radio ("SMR"), cellular and Business and Industrial/Land Transportation ("BL/T") operations.^{161/} Over the last few years public safety systems using the bands have experienced harmful interference from adjacent band digital SMR and cellular licensees.^{162/} This problem of interference could worsen as the number of public safety and CMRS systems in the band continues to grow.

In March 2002, the Commission issued a NPRM to solicit comment on how to remedy the problem of interference to public safety operations in the 800 MHz band.^{163/} The NPRM focused on two proposals, one from the National Association of Manufacturers ("NAM"), many of whose members operate private communications systems on the B/ILT frequencies in the 800 MHz band, and the other from digital SMR

^{157/} See FCC Seeks Comment on the National Telecommunications and Information Administration's Report "An Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands," *Public Notice*, DA 02-1780 (rel. July 24, 2002).

^{158/} Comments of the Telecommunications Industry Association in ET Docket No. 00-258 (filed August 8, 2002).

^{159/} *Id.* See, also Comments of the Cellular Telecommunications and Internet Association in ET Docket No. 00-258 (filed August 8, 2002).

^{160/} In the Matter of Improving Public Safety Communications in the 800 MHz Band, *Notice of Proposed Rulemaking*, WT Docket No. 02-55, FCC 02-81, (rel. March 15, 2002) ("800 MHz NPRM") at ¶ 11.

^{161/} *Id.* at 20.

^{162/} *Id.* at ¶ 14.

^{163/} See *id.* at ¶ 2.

operator Nextel. The original NAM proposal would have created three separate but adjacent channel blocks in the 806/851-824/869 MHz band: one block would have been reserved for public safety, another for conventional SMR and B/ILT systems, and another for cellularized architecture SMR systems like Nextel.^{164/} The original Nextel proposal would have created two spectrum blocks: one reserved for public safety services and another reserved for digital CMRS networks.^{165/} The NPRM emphasized that these plans do not exhaust the possibilities for 800 MHz band restructuring and encouraged parties to submit alternative proposals.^{166/}

The Notice also asked parties to address whether incumbents affected by any rebanding should be able to retain their channels on a secondary, non-interference basis, and to provide a proposed implementation schedule and plan to coordinate the frequencies of relocated channels.^{167/} Finally, the Commission's NPRM solicited comment on a proposal by the Personal Communications Industry Association ("PCIA") to consolidate the B/ILT operations into one pool, and a proposal to allow CMRS use of the 900 MHz land mobile band.^{168/}

In August 2002, Nextel, representatives of the public safety community and a coalition of private wireless licensees submitted a "Consensus Plan" that offered a new solution to interference in the 800 MHz band.^{169/} According to Nextel, the joint parties to the compromise and their members include or represent almost all licensees vulnerable to CMRS-public safety interference in the 800 MHz band.^{170/} Groups that have signed on to the plan include the Association of Public Safety Communications Officials-International ("APCO"), the International Association of Fire Chiefs ("IAFC"), the Major Cities Chiefs Association, The Industrial Telecommunications Association ("ITA"), the American Mobile Telecommunications Association, PCIA and others.^{171/} The "Consensus" Plan splits the 800 MHz band into two contiguous blocks of spectrum: one block for non-cellularized (high-site, high power) system architectures and one block for cellular-like (low-site, low-power) system architectures.^{172/} Public safety, traditional

^{164/} *Id.* at ¶¶ 21-22.

^{165/} *Id.* at ¶¶ 23-25.

^{166/} *Id.* at ¶ 26. In addition, the Notice asked parties to comment on whether some form of frequency coordination would eliminate intermodal interference, whether the interference could be caused by factors other than receiver characteristics, the impact of any relocation of incumbents on interference, and the efficacy of transitioning incumbents to narrowband operation in the event of relocation. *Id.* at ¶¶ 27-28. Parties were also asked to comment on whether additional spectrum should be allocated to public safety systems, whether additional channels should be devoted to interoperability, and how to facilitate any necessary relocation of incumbents, including reimbursement proposals for the cost of relocation and sources of replacement spectrum. *See id.* at ¶ 29.

^{167/} *See id.* at ¶ 62.

^{168/} *See id.* at ¶¶ 83-86.

^{169/} *See* Reply Comments of APCO, IAFC, AAR, ITA, PCIA, *et. al.*, WT Docket No. 02-55 (August 2002).

^{170/} *See* Reply Comments of Nextel in WT Docket No. 02-55 (August 2002) at 3.

^{171/} *Id.* at 2-3.

^{172/} *Id.* at 4-11.

SMR and B/ILT licensees would be eligible for the non-cellularized block.^{173/} CMRS providers would be eligible for the other.^{174/}

Unlike Nextel’s original proposal, the “Consensus” proposal grants replacement spectrum to private wireless operators that would be required to vacate their current 800 MHz spectrum. In addition, Nextel would return 4 MHz of spectrum located in 700 MHz band, 4 MHz of spectrum in the 900 MHz band, and 2.5 MHz of spectrum in the 800 MHz band.^{175/} While the 700 MHz spectrum would be used solely for public safety operations, the 900 MHz spectrum would be used to relocate private users that currently occupy the 800 MHz B/LT band.^{176/} Under the plan, for each 25 kHz 800 MHz channel voluntarily vacated, incumbents would receive a 50 kHz channel assignment in the 900 MHz band.^{177/} Nextel also reiterated its commitment to pay \$500 million toward the cost of public safety relocation.^{178/} In replacement for the 800 MHz spectrum it would vacate, Nextel and the “Consensus” Plan parties propose that Nextel receive 5 MHz of unlicensed PCS spectrum on a nationwide basis at 1.9 GHz and another 5 MHz of reserve MSS spectrum.^{179/}

On September 6, 2002, the Commission issued a Public Notice seeking comment on the “Consensus Plan.”^{180/} As reflected in the comments, criticism of the “Consensus Plan” centers on the cost of relocating certain users to the 900 MHz and 700 MHz spectrum bands, and the accusation that Nextel is making a “grab” for 1.9 GHz and reserve MSS spectrum.^{181/}

H. Part 15 (Unlicensed) Proceedings

In addition to its much-debated UWB order, the Commission amended Part 15 in other ways this year. In a May 30, 2002 Order,^{182/} the Commission adopted technical changes to section 15.247 that allow for additional flexibility and spectrum sharing by Wi-Fi and Bluetooth developers. Specifically, the Order made the following changes:

- New digital modulation techniques are now permitted in the 915 MHz, 2.4 GHz, and 5.7 GHz bands, and may operate according to the same rules previously reserved for direct sequence spread spectrum (“DSSS”) systems. The Commission based the decision on the fact that the spectrum characteristics of

^{173/} *Id.*

^{174/} *Id.*

^{175/} *Id.* at 7-8.

^{176/} *Id.* at 8.

^{177/} *Id.*

^{178/} *Id.* at 9.

^{179/} *Id.* at 8.

^{180/} Wireless Telecommunications Bureau Seeks Comment on “Consensus Plan” Filed in the 800 MHz Public Safety Interference Proceeding, *Public Notice*, DA 02-2202 (rel. September 6, 2002).

^{181/} *See, e.g.*, Joint Further Comments of Alltel, AT&T Wireless, Cingular Wireless *et al.*; Further Comments of NEC in WT Docket No. 02-55 (filed September 23, 2002).

^{182/} Amendment of Part 15 of the Commission’s Rules Regarding Spread Spectrum Devices, *Second Report and Order*, 17 FCC Rcd 10755 (2002).

the new techniques are similar to DSSS and, therefore, are no more likely to cause interference. The change will permit the authorization of new high data rate technologies that can be used for wireless local area network (“W-LAN”) applications.

- DSSS systems are no longer required to have a processing gain of 10 dB. The Commission determined that manufacturers have an incentive to design systems to operate properly when near other devices, such that a specific regulatory mandate is not required.
- In the 2.4 GHz band, frequency hopping spread spectrum (“FHSS”) systems have additional flexibility, as they may now use as few as 15 hops -- down from the previously-required 75 hops -- with bandwidths of up to 5 MHz and no minimum band occupancy requirement, but with output power reduced from 1 W to 125 mW. The Bluetooth industry and other groups had requested the Commission to pair the reduction in required hops with a new requirement for adaptive or “smart hopping” techniques to reduce the potential for interference. The Commission rejected this request, stating that the lower power limits would be sufficient to protect against interference.

In July 2002, the Commission adopted an Order to impose emission limits on radar detectors.^{183/} The order came in response to widespread complaints by operators of very small aperture satellite terminals (“VSATs”) that radar detectors were disrupting their operations in the 11.7-12.2 GHz band. Under existing rules, radar detectors, like most receivers (except Citizens Band and others tuned to 30-960 MHz), were not required to comply with any limits on emissions resulting from their local oscillators. The Commission’s own tests indicated that some radar detectors were emitting into the VSAT band at over 100,000 microvolts/meter (as measured at 3 meters), over 200 times higher than the general Part 15 emissions limit of 500 microvolts/meter for unintentional radiators, which now applies to these devices. In a later Order,^{184/} the Commission extended until October 27, 2002 the date by which all radar detectors being marketed must be in compliance with the new rule, but denied a petition from RadioShack to extend the date further, despite the fact that RadioShack claimed it would face a financial hardship given its inventory of several million dollar’s worth of non-compliant equipment.

I. SDARS Terrestrial Repeaters

In September 2001, the Commission granted the applications for Special Temporary Authority (“STA”) filed by the two satellite digital audio radio service (“SDARS”) licensees, Sirius Satellite Radio and XM Radio (“XM”), to operate in-band terrestrial repeaters in order to fill coverage gaps in their nationwide networks, especially

^{183/} Review of Part 15 and Other Parts of the Commission’s Rules, ET Docket No. 01-278, *First Report and Order*, FCC 02-211 (rel. July 19, 2002).

^{184/} Review of Part 15 and Other Parts of the Commission’s Rules, ET Docket No. 01-278, *Order*, FCC 02-238 (rel. Aug. 28, 2002).

in “urban canyons,” where the reach of satellite signals are often limited by buildings.^{185/} The STAs remain valid until final rules on terrestrial repeaters are adopted.

In November 2001, the Commission issued a Public Notice^{186/} seeking comment on a proposal to establish a methodology for SDARS licensees to pay the costs associated with eliminating the effects of blanketing interference caused to licensees in the Wireless Communications Service (“WCS”). The Public Notice also sought comment on methods for limiting interference to MDS and ITFS licensees. As of this writing, the Commission had not issued final rules.

The Commission granted the SDARS STAs over the objections of terrestrial wireless service licensees – which are concerned about possible interference – and traditional radio broadcasters – which fear that SDARS licensees might offer local programming in direct competition with them. This fear was fueled earlier this year when news emerged that XM holds a patent for a technology that would permit the transmission of geographic-specific services to SDARS receivers. XM promptly reaffirmed its support of the Commission’s proposal “to limit transmissions from repeaters to only programming that is transmitted by an authorized DARS satellite.”^{187/} Nevertheless, broadcast interests called upon the Commission to clarify in any final rules that SDARS repeaters may not be used “in any manner to facilitate the provision of locally differentiated services.”^{188/}

The terrestrial repeater issue cut against the SDARS licensees’ interests in a May 2002 order in which the Commission rejected XM’s request to adopt stricter out-of-band emission limits for a new WCS allocation at 2385-2390 MHz. The Commission reasoned that, in addition to the 40 MHz separation between the SDARS band and the new WCS allocation, the WCS operations are most likely to be in urban areas, where the SDARS networks can rely on the increased signal strength of their terrestrial repeaters to protect against potential WCS interference.^{189/}

J. Software Defined Radios

Although some industry observers might suggest that the Commission’s regulations do not always keep up with the pace of technological development, most would agree that the Commission’s September 2001 Order addressing software defined radio (“SDR”) places it ahead of the curve with respect to this new technology. SDR

^{185/} See XM Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters, *Order and Authorization*, DA 01-2172 (rel. Sept. 17, 2001) and Sirius Satellite Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters, *Order and Authorization*, DA 01-2171 (rel. Sept. 17, 2001).

^{186/} Request for Further Comment on Selected Issues Regarding the Authorization of Satellite Digital Audio Radio Service Terrestrial Repeater Networks, *Public Notice*, IB Docket No. 95-91 (Nov. 1, 2001).

^{187/} See *ex parte* filing of XM Radio Inc., IB Docket No. 95-91 (March 7, 2002).

^{188/} See, e.g., *ex parte* filing of Radio One, Inc., IB Docket No. 95-91 (May 28, 2002) (citing NAB’s proposed language).

^{189/} Amendment of Parts 1, 2, 27, and 90 of the Commission’s Rules, *Report and Order*, 17 FCC Rcd 9980 (May 24, 2002) at ¶ 132.

permits changes to be made in a radio's operating parameters, including frequency, radiated power, and modulation type, without any change of hardware. Instead, SDRs can be reconfigured by a software download to transmit and receive on any frequency and in any transmission format, effectively making SDRs multi-service, multi-standard, multi-mode and multi-band devices. Although many different applications (both licensed and unlicensed) for SDR are possible, the most immediate plans are for the incorporation of SDR into handheld communications devices such as mobile handsets. A single SDR handset, therefore, could be used on the wireless networks of different carriers employing different technological standards such as CDMA, TDMA, and GSM, and then could be remotely upgraded to accommodate 3G protocols once they are rolled out. SDR could also be used to permit interoperability between different devices on a temporary basis, such as between communications equipment used by public safety personnel from various agencies working at one site.

The Commission views SDR as a means for promoting the efficient use of spectrum by facilitating spectrum sharing. SDR could become a major factor in the success of proposals for secondary spectrum markets in which licensees could "lease" their spectrum to third parties on a temporary basis. By providing equipment flexibility, SDR could reduce the cost and time required to deploy radio equipment for short-term use on a particular frequency and network. Conceptually, SDR devices could even share spectrum on a "per connection" basis by monitoring spectrum availability in a given area to locate a "hole" or open frequency on which the user could operate.

SDR is still in its infancy. For example, the "world's first" CDMA-based mobile wireless phone call on a SDR platform was completed just last year, according to one SDR developer's press release.^{190/} Yet even before this first call, the Commission had already issued an order amending its rules to streamline the equipment authorization process for SDR devices.^{191/} Under the old rules, a change in the frequency, power or modulation type of a transmitter required a completely new application and, upon approval, the re-labeling of the device with a new FCC identification number. Under the new rules for SDRs, such a change will be considered a "permissive change" and, although still requiring prior approval, may be accomplished through a significantly streamlined filing process. Moreover, so long as the change is requested by the original holder of the equipment authorization, the FCC identification number will not have to be changed, thereby avoiding the need to physically "re-call" the device for re-labeling. A third-party (for example, a carrier) may request a change by agreeing to become the party responsible for the device's compliance and by obtaining a new identification number. To avoid the "re-call" issue in this situation, the Commission will permit electronic labeling, such that the identification number can be accessed on the device by means of a LED or LCD display.

^{190/} See "World First – CDMA Based Mobile Wireless Phone Call Made on SDR Platform Without Qualcomm Chipsets," PR Newswire (Sept. 24, 2001). The developer, Advanced Communications Technologies Inc., claims that the ability to provide CDMA functionality without a Qualcomm chipset could generate significant savings in chipset technology licensing fees for carriers.

^{191/} See Authorization and Use of Software Defined Radios, ET Docket No. 00-47, *First Report and Order*, FCC 01-264 (Sept. 14, 2001). The Order establishes a definition of SDR as "a radio that includes a transmitter in which the operating parameters of frequency range, modulation type or maximum output power (either radiated or conducted) can be altered by making a change in software without making any changes to hardware components that affect radio frequency emissions."

The Commission's Order did not mandate specific security or authentication requirements out of a desire not to interfere with technological development. Instead, the Commission asked the industry to report on security developments. In September 2002, the SDR Forum, an SDR industry association, filed a 120-page report¹⁹² that largely validated the Commission's decision. The report indicated that the development of SDR security applications is moving rapidly, building on already-existing key digital security technologies used for information content (e.g., credit card) and general wireless applications. The report noted that validation and other security issues are particularly important for public safety communications, as most radios used by emergency responders will use some form of SDR technology in the coming years.

III. Auction and Licensing Matters

The past twelve months have been very challenging for the Commission on the auction and licensing front. The weak condition of the capital markets, along with pressure from the industry and Congress, forced the Commission to take several steps to delay scheduled auctions or alter long-standing auction practices. Despite clear evidence of problems within the capital markets, the Commission took some of its more proactive steps, such as postponing certain spectrum auctions and seeking a settlement of the Nextwave litigation, reluctantly. Nevertheless, the Commission's auction-related activities over the past twelve months underscore the attention the Commission has been forced to give to the current plight of the capital markets.

Responding to industry and Congressional pressure, the Commission unsuccessfully sought to settle the Nextwave litigation, released most of the upfront payments made by Nextwave reauction (Auction 35) winners and took steps to allow Auction 35 winners to withdraw from their obligations to pay for licenses secured through the auction. The Commission also postponed several spectrum auctions scheduled to be held this year, including the auction of the upper 700 MHz band. Following is a more detailed description of the major auction-related activities undertaken by the Commission over the past twelve months.

A. Nextwave Bankruptcy

The past twelve months ushered in several new developments in the on-going saga involving bankrupt mobile company, Nextwave Communications ("Nextwave"). Aside from providing wonderful copy for news reporters, the Nextwave saga raises fundamental issues regarding the scope of the Commission's auction authority. The Nextwave case ultimately will determine how the Commission's regulatory authority over auctioned licenses can be harmonized with certain provisions of the Bankruptcy Code.

¹⁹² SDR Forum, "Report on Issues and Activity in the Area of Security for Software Defined Radios," filed in ET Docket 00-47 (Sept. 11, 2002).

In the mid-1990s, Nextwave bid for and won the right to use mobile spectrum in several large markets in the U.S. Its winning bids were made in a Commission spectrum auction that was limited to entrepreneurial and small businesses. Under rules promulgated at the time, Nextwave qualified for government financing covering 90 percent of its bid. Unfortunately for the government, Nextwave defaulted on its installment payment obligations and declared bankruptcy. After key legal victories in the U.S. Court of Appeals for the Second Circuit,¹⁹³ the Commission cancelled Nextwave's licenses and resold them in Auction 35, netting over \$16 billion in high bids. Unfortunately for the Commission, the majority of the proceeds from the auction were never paid into the U.S. Treasury because the Court of Appeals for the District of Columbia subsequently declared that the Commission's decision to cancel NextWave's licenses violated section 525 of the U.S. Bankruptcy Code.¹⁹⁴ Section 525 prohibits the government from canceling the license of a debtor in bankruptcy solely on account of its failure to pay a dischargeable debt. The U.S. Supreme Court heard oral argument in the government's appeal of the D.C. Circuit's decision in October 2002, and is expected to render a decision in the Spring of 2003.

Prior to the Supreme Court's decision to review of the D.C. Circuit decision, the government and private parties involved in the case (including Nextwave and several winners of licenses sold in Auction 35) negotiated a settlement to the litigation that would have resulted in the Auction 35 winners securing licenses to the spectrum. The settlement, however, required the enactment of legislation. Because Senators Earnest Hollings and John McCain were opposed to the legislation, it could not be enacted by the date agreed upon by the negotiating parties. Responding to pressure from many of the Auction 35 winners, and citing equity concerns, the Commission refunded all but 15 percent of the deposits provided for the disputed licenses.¹⁹⁵ The Commission did not, however, relieve the bidders of their obligations to make good on their bids in the event the government was successful in its litigation against Nextwave. At some of the reaction winners' urging, legislation has been introduced in the House and Senate to eliminate the contingent liability. Verizon Wireless has also sought to have it extinguished in the D.C. Circuit and Federal Court of Claims.¹⁹⁶ Finally, on September 12, 2002, the Commission, noting that it had "received submissions asserting that unique and troubling financial circumstances have led to difficulties in accessing capital and other problems for companies of all sizes," sought comment on two proposals that would provide for a complete or partial refund of the remaining deposits outstanding and the complete extinguishment of the contingent liability.¹⁹⁷

^{193/} See, e.g., *In re NextWave Personal Communications Inc.*, 200 F.3d 43 (2nd Cir. 1999).

^{194/} *Nextwave Personal Communications Inc. v. FCC*, 254 F.3d 130 (D.C. Cir. 2001), *cert. granted*, U.S. ____, 70 U.S.L.W. 3351 (March 4, 2002) (Nos. 01-653, 01-657).

^{195/} Requests for Refunds of Down Payments Made In Auction No. 35, *Order*, FCC 02-99 (rel. March 27, 2002).

^{196/} See *Cellco Partnership c/b/a Verizon Wireless v. FCC*, D.C. Cir. No. 02-1110 (filed April 8, 2002); *Cellco Partnership d/b/a Verizon Wireless v. United States*, C.F.C. No. 02-280C (filed April 5, 2002).

^{197/} See Commission Seeks Comment on Disposition of Downpayments and Pending Applications for Licenses Won During Auction 35, *Public Notice*, WT Docket No. 02-276 (rel. September 12, 2002) at 3. The first proposal would allow the Commission to refund the full amount of monies on deposit at the Commission for licenses formerly held by Nextwave and another bankrupt company, Urban Communications. In addition, the Commission would waive its default rules for the licenses, subject to

B. 700 MHz Auctions

The past 12 months also saw further action in the longstanding effort by the Commission to auction spectrum in the lower and upper 700 MHz bands. This spectrum is currently used by television broadcasters for the provision of analog television. In the Balanced Budget Act of 1997, Congress, as part of the transition to digital television, directed the Commission to auction the spectrum for new services. However, Congress also required that the analog broadcasters be able to remain on the spectrum until 2006 or until digital television penetration in the U.S. reached 85 percent, whichever is longer. At this stage, with digital television penetration abysmally low, experts doubt an 85 percent penetration level will be reached before the 2006 deadline, meaning that analog broadcasters will have a statutory right to remain on the spectrum band for some time to come. The major wireless carriers do not want to spend significant amounts of money to acquire the spectrum at auction only to have to spend significantly more to coax the broadcasters into moving off voluntarily.

Under former Chairman William Kennard, the Commission delayed the upper 700 MHz auction several times to allow for voluntary negotiations between the wireless industry and broadcasters to clear the spectrum. Chairman Powell, however, expressed a reluctance to countenance further delays in the face of express statutory language requiring the Commission to auction the spectrum and deposit auction proceeds into the U.S. Treasury by September 2002.^{198/} Responding to claims by CTIA that, notwithstanding the statutory requirement, the 700 MHz auctions should be delayed until more progress has been made in moving incumbent broadcasters off the bands, he stated:

[T]he problem of broadcast incumbency is one for which there is no short path to resolution. The transition to digital television could take well over a decade. One might argue that a modest delay is warranted, if there were a credible and imminent possibility that the bands at issue would be unburdened, but the proponents of delay do not offer one, and I see none. I am hesitant to keep spectrum off the market indefinitely, awaiting some as-of-yet unidentified solution that would greatly accelerate the transition. Jawboning, voluntary agreements and hope can only get us so far.^{199/}

coordination with the Department of Justice. The Commission sought comment, among other things, on whether parties taking advantage of such option should be barred from participating in a reauction of the licenses or from otherwise obtaining them. *Id.* at 4. The second proposal would allow individual applicants to identify those license applications that they would like to remain pending and those that they would like dismissed. *Id.* The Commission's default rules would be waived for the dismissed license applications, and the Commission would, subject to Department of Justice coordination, forgive the applicable debt. *Id.* at 5. Again, the Commission sought comment on whether an Auction 35 bidder taking advantage of this option should be barred from the reauction of the relevant licenses. *Id.*

^{198/} See 47 U.S.C. § 309(j)(14)(C)(ii); Balanced Budget Act, § 3007 (uncodified, reproduced as a note to 47 U.S.C. § 309(j)).

^{199/} Auction of Licenses in the 747-762 and 777-792 MHz Bands (Auction 31) Postponed Until January 12, 2003, *Public Notice*, FCC 02-158 (rel. May 24, 2002) (separate statement of Chairman Powell).

He and Commissioners Abernathy and Copps supported a decision to briefly delay the auction of the upper 700 MHz band until January 14, 2003 to give Congress time to consider changing the statutory mandate to conduct the upper 700 MHz auction, but to proceed with the auction of the lower 700 MHz band as planned.^{200/} Commissioner Martin, while agreeing with the decision to delay the upper 700 MHz band auction, dissented from the decision to proceed with the auction of the lower 700 MHz band, noting that the Commission had on several prior occasions determined that it possessed the authority to postpone, for spectrum management reasons, the auctioning of 700 MHz spectrum.^{201/}

Congress was not satisfied with the Commission's decision. On June 20, 2002, President Bush signed into law a measure postponing indefinitely the auction of the upper 700 MHz band and directing the Commission to impose a short delay of the lower 700 MHz auction.^{202/} Under this provision, the Commission must report to Congress within a year on transition plans for digital television; when the Commission intends to reschedule the upper 700 MHz band auction; and the availability of spectrum for advanced services.^{203/} As of September 2002, the Commission had not established a new date for the upper 700 MHz auction. On a related issue, in September 2002 Representative W.J. Tauzin, Chairman of the House Commerce Committee, circulated a discussion draft bill designed to spur the digital television transition. Among other things, the draft bill would amend the statutory language enacted in the Balanced Budget Act of 1997 to eliminate the ability of broadcasters to remain on the 700 MHz band until DTV penetration in the U.S. reaches 85 percent.^{204/}

The auction of the lower 700 MHz band (Auction 44) ended in September 2002, netting \$88.6 million in net high bids. Rural carriers, who are less affected by existing television broadcast operations on the band than the nationwide carriers, were the parties most active in the auction. None of the major nationwide CMRS providers participated. Major winners of licenses in the lower 700 MHz auction were Aloha Partners and Vulcan Group, an entity controlled by Microsoft cofounder, Paul Allen.

C. 1670-75 MHz Auction

In September 2002, the Commission's auction of a nationwide license at 1670-1675 MHz, originally scheduled for October 30, 2002, was postponed until April 30, 2003.^{205/} The Commission delayed the auction at the request of ArrayComm, a developer of Time Division Duplex ("TDD") wireless broadband technology which aims to participate in the auction. In its request, ArrayComm asserted that the state of the

^{200/} *Id.*

^{201/} *Id.* (Separate Statement of Commissioner Martin Approving in Part and Dissenting in Part).

^{202/} Auction Reform Act, Pub. Law 107-195 (June 20, 2002).

^{203/} *Id.*

^{204/} See "Tauzin Promises Hard Line on 2006 DTV Transition Deadline," *TR Daily* (September 25, 2002).

^{205/} 1670-75 MHz Band Auction (Auction No. 40) Postponed until April 30, 2003, DA 92-2395 (rel. September 25, 2002).

capital markets made it difficult to raise the funding necessary to participate in the auction.^{206/}

Conclusion

The past twelve months have been extremely challenging for the wireless industry, especially in the capital markets. The Commission has, at times, appeared sympathetic to these challenges. At the same time, however, the Commission's perspective on the wireless industry has evolved to the point where wireless is no longer viewed as a nascent service. Although, owing to the existence of significant competition, the Commission continues to pursue a deregulatory agenda and has provided significant regulatory relief to wireless carriers, it also expects wireless carriers to deliver on a wide variety of public safety, law enforcement and consumer oriented mandates. In recent months, the Commission has struggled to determine how to best achieve these public benefits without further eroding the industry's position within the investment community.

In addition, deliberations this year on a number of contentious spectrum allocation and new technology matters highlighted the need for the Commission to develop a more rational, market-oriented spectrum policy. Chairman Powell took significant steps toward achieving such a policy by creating a task force to focus on interference, spectrum efficiency, use flexibility and other spectrum-related issues. Spectrum policy issues will continue to occupy a significant portion of the Commission's wireless regulatory agenda in the coming months as the Commission seeks to resolve several complex spectrum sharing proceedings and develop general principles that can be applied consistently across the wide variety of spectrum-based services under its authority.

^{206/} Letter from Paul G. Madison, Counsel for ArrayComm, Requesting Postponement of Auction 46 (Sept. 13, 2002).