

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket No. 02-55
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	
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	)	ET Docket No. 00-258
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service	)	ET Docket No. 95-18
	)	

**BAS RELOCATION STATUS REPORT**

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## Executive Summary

Sprint Nextel Corporation (Sprint Nextel) has made significant progress in transitioning Broadcast Auxiliary Service (BAS) licensees to the new 2 GHz band plan. *All* eligible BAS licensees are now engaged in the relocation process, and virtually all have submitted an inventory of their BAS equipment to Sprint Nextel. Sprint Nextel has verified the equipment inventories of 80% of all licensees in the band. And Sprint Nextel and BAS licensees are now making rapid progress in the preparation and review of quotes from manufacturers and vendors for implementing the relocation.

The BAS transition is immensely complicated. Sprint Nextel must transition approximately 1000 incumbent BAS systems, each of which has scores of delicately integrated transmitters, receivers, antennas, controllers, and related equipment that sometimes require municipal review or international coordination. Some BAS equipment is 30 years old or older and can be difficult to locate because it is used only occasionally or kept as a backup in a remote location. Other equipment is in near-constant use and requires special considerations to ensure continued operational readiness. Often BAS equipment is located in difficult to reach places – on towers, on rooftops, in vans, in helicopters, and even on devices mounted on blimps. To inventory this equipment, Sprint Nextel and the licensee must use specially trained vendors who are in short supply and may also require local governmental approval prior to accessing. Sprint Nextel and its vendors must closely coordinate inventory verification visits with the licensee to ensure that its engineering staff is present during the visit. During installation, the vendors must also schedule their work to avoid disruption to the licensee's electronic news gathering (ENG) operations, which means that installations must occur late at night and cannot take place during weekdays, sweeps periods, holidays, elections, or during major news and national and local sporting events.

Sprint Nextel anticipated many of these challenges and has responded to them aggressively. For example, Sprint Nextel has pre-funded the production of a large amount of replacement equipment inventory to implement relocation. Sprint Nextel has spent more than \$186 million to purchase an inventory of more than 12,000 pieces of BAS radiofrequency equipment, including more than 6,000 transmitters and receivers, more than 4,000 controllers, and nearly 2,000 antennas and antenna upgrades. Sprint Nextel has also completed individualized template contracts with all major broadcast group licensees that collectively represent 65% of BAS licenses. Sprint Nextel has also enlisted a large, talented pool of full-time employees, manufacturers, integrators, and contractors to meet anticipated demand during the transition.

Sprint Nextel's substantial up-front investment in equipment, process, and personnel should allow the company to complete the 2 GHz BAS retuning in an efficient and effective manner. By adding staff, increasing warehouse space, storing up inventories, developing templates, and streamlining processes at every level, Sprint Nextel has helped ensure that BAS licensees move to the new bandplan as quickly as possible.

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### Attachments:

Declaration of John Dulany on behalf of Nucomm Inc. (Nucomm)

Joint Declaration of Joseph Giardina and Tim Carroll on behalf of DSI RF Systems, Inc. (DSI)

Declaration of Daniel McIntyre on behalf of Microwave Radio Communications (MRC)

Declaration of Christopher H. Scherer on behalf of the Society of Broadcast Engineers (SBE)

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**BAS RELOCATION STATUS REPORT**

**I. Introduction and Summary**

Sprint Nextel Corporation (Sprint Nextel) has made significant progress in transitioning Broadcast Auxiliary Service (BAS) licensees to the new 2 GHz band plan. In this twenty-four month progress report, Sprint Nextel offers detailed information about the complex, multi-party effort underway to transition nearly 1000 BAS licensees to a more compact frequency arrangement that will allow new terrestrial mobile and mobile satellite services to operate in the spectrum formerly occupied by the analog BAS operations.<sup>1</sup>

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<sup>1</sup> In the *Report and Order (800 MHz R&O)*, the Federal Communications Commission (Commission) required Sprint Nextel to relocate all eligible BAS licensees to the new BAS band plan at 2025-2110 MHz within 31.5 months after the effective date of the *800 MHz R&O*. See

Sprint Nextel – in cooperation with BAS equipment manufacturers, system integrators, installers, contractors, and the broadcast community – has invested heavily in equipment, personnel and processes to accelerate the pace of the BAS transition:

- Sprint Nextel has spent more than \$186 million to purchase an inventory of more than 12,000 pieces of BAS radiofrequency equipment, including more than 6,000 transmitters and receivers, more than 4,000 controllers, and nearly 2,000 antennas and antenna upgrades;
- Sprint Nextel has completed individualized template contracts with all major broadcast group licensees that collectively represent 65% of BAS licenses;
- Sprint Nextel has added staff and currently employs 45 full-time professionals on the BAS transition effort, including 10 broadcast engineers, 11 deal managers, 7 project managers, 6 deal processors, 4 attorneys, and 2 contractors, as well as another 30 legal, supply chain, finance and other employees who devote a material portion of their time to the transition; and
- Sprint Nextel has enlisted a large, talented pool of manufacturers, integrators, and contractors and has worked closely with them to expand the scale and scope of their operations to meet anticipated demand during the transition.

As a result of these efforts, *all* eligible BAS licensees are now engaged in the relocation process, and virtually all have submitted an inventory of their BAS equipment to Sprint Nextel. Sprint Nextel has verified the equipment inventories of 80% of all

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*Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd. 14969, ¶¶ 252, 352 (2004) (*800 MHz R&O*), as amended by Erratum, WT Docket No. 02-55 (rel. Sep. 10, 2004); Second Erratum, 19 FCC Rcd. 19651 (2004); Public Notice, “Commission Seeks Comment on *Ex Parte* Presentations and Extends Certain Deadlines Regarding the 800 MHz Public Safety Interference Proceeding,” 19 FCC Rcd. 21492 (2004) (extending BAS relocation deadlines by 45 days); Third Erratum, 19 FCC Rcd. 21818 (2004); Supplemental Order and Order on Reconsideration, 19 FCC Rcd. 25120 (2004) (*Supplemental Order*); Erratum, WT Docket No. 02-55 (rel. Jan. 19, 2005); and Memorandum Opinion and Order, 20 FCC Rcd. 16015 (2005) (*800 MHz MO&O*). The Commission also required Sprint Nextel to “file progress reports within twelve months and twenty-four months after the effective date of [the *800 MHz R&O*] on the status of the [BAS] transition, including identifying the markets that will be relocated during stage one, and all remaining markets that will be relocated during stage two.” *800 MHz R&O* ¶ 352. BAS spectrum in the 2 GHz band is also authorized for use by the Cable Television Relay Service (CARS) and the Local Television Transmission Service (LTTS). This filing refers to BAS, CARS, and LTTS collectively as “BAS.”

licensees in the band. And Sprint Nextel and BAS licensees are now making rapid progress in the preparation and review of quotes from manufacturers and vendors for implementing the relocation.

Hundreds of BAS licensees are working in good faith to move the process forward. The primary broadcast trade associations – the Association for Maximum Service Television (MSTV), the National Association of Broadcasters (NAB), and the Society of Broadcast Engineers (SBE) – have shown strong leadership in seeking constructive solutions to accelerate BAS relocation. Manufacturers and system integrators are also doing their part to implement relocation as efficiently and quickly as possible.

## **II. Sprint Nextel and BAS Licensees Have Made Significant Progress During the Past Year**

The BAS relocation project – which involves thousands of discrete networks that can cross multiple geographic areas, tens of thousands of pieces of costly fixed and mobile equipment, and hundreds of millions of dollars – has proven far more complex than originally anticipated. The FCC has licensed more than 1000 BAS licensees and each operates an integrated network of links among a variety of facilities built over several decades that vary wildly in location, use, complexity, accessibility, and upkeep.<sup>2</sup> To complete the transition, Sprint Nextel and the broadcast community must:

- inventory equipment and determine facilities that are eligible for transition;
- obtain competitive bids from BAS equipment manufacturers and installers that describe the system exactly as it will be built;

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<sup>2</sup> There are a total of 1083 BAS licensees in the 2 GHz band. Approximately 90 of these licensees are not using their licenses, and Sprint Nextel is working with these parties to cancel their unused licenses voluntarily. The remaining licensees must transition to the new 2 GHz band plan.

- negotiate detailed frequency relocation agreements (FRAs) that account for all installations and expenses consistent with Sprint Nextel's role as a steward of funds dedicated to the U.S. Treasury;
- relocate BAS licensees across multiple TV markets in a coordinated manner to avoid inter-market interference problems while accounting for sweeps, news events and weather; and
- minimize the disruption to more than 1000 incumbent BAS systems, each of which has scores of delicately integrated transmitters, receivers, antennas, controllers, and related equipment and sometimes require municipal review or international coordination to implement relocation.

In the face of these challenges, Sprint Nextel, BAS equipment manufacturers, systems integrators, BAS licensees and the broadcast community have worked together in good faith and have made strong progress since last year's report.

<b>Phase</b>	<b>Feb. 2006*</b>	<b>Mar. 2007*</b>	<b>Increase in Percentage</b>
1a. Markets Kicked Off	57%	100%	<b>+43%</b>
1b. BAS Stations Engaged in Transition	60%	100%	<b>+40%</b>
2. Inventories Submitted to Sprint Nextel	55%	99%	<b>+44%</b>
3. Inventories Verified and Agreed To	31%	80%	<b>+49%</b>
4. Quote Packages Submitted to Sprint Nextel	3%	37%	<b>+34%</b>
5a. Quote Packages Approved by Sprint Nextel	1%	30%	<b>+29%</b>
5b. Frequency Relocation Agreements Signed (includes cancelled BAS licenses (2% of subtotal))	1%	22%	<b>+21%</b>
6a. Purchase Orders Submitted	0%	17%	<b>+17%</b>
6b. Purchase Orders Fulfilled	0%	5%	<b>+5%</b>
7. Equipment Installed	0%	2%	<b>+2%</b>
8. Markets Relocated	3.8%	4.7%	<b>+0.9%</b>

\* Figures exclude Guam and the U.S. Virgin Islands.

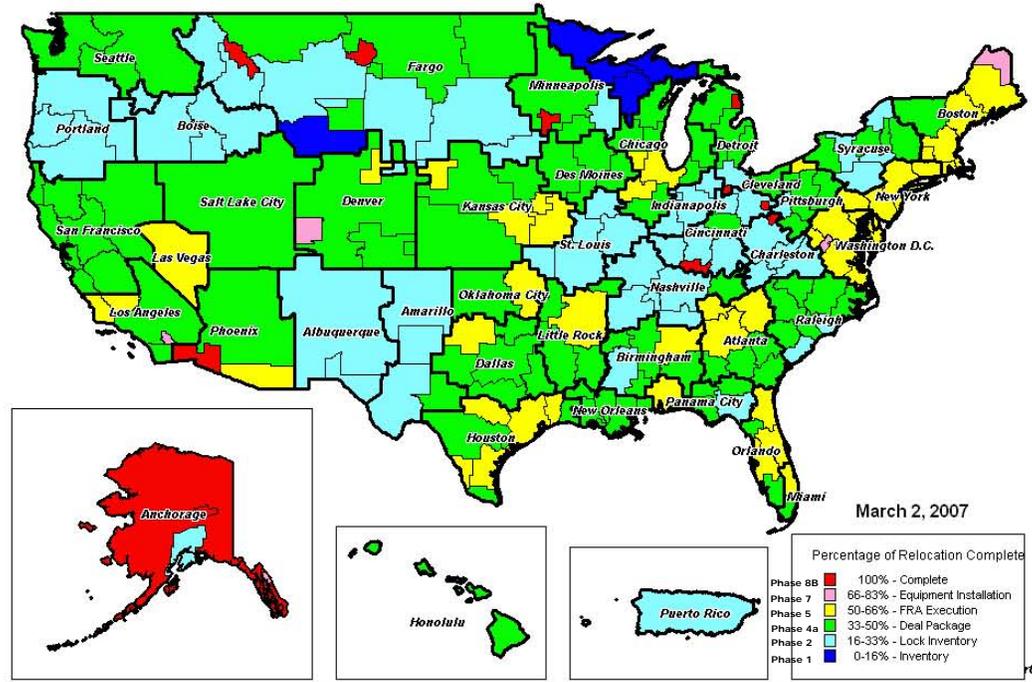
As indicated above, Sprint Nextel has kicked-off relocation in all markets, and all eligible BAS licensees are now engaged in the process. Virtually all eligible licensees have submitted an inventory of their BAS equipment, and 80% of licensees have had their inventories verified and have agreed with Sprint Nextel as to which inventory items will be replaced or upgraded. This value represents a forty-nine percentage point increase from last year, and shows that the parties are far along in tackling this critical, and time-consuming, step. Sprint Nextel and BAS licensees have also made good progress in the submission and approval of deal packages and quotes for the cost of relocating the BAS licensee's facilities to the new band plan: more than one-third of eligible licensees have submitted deal packages and quotes, and almost one-third have received approved deal packages and quotes. Sprint Nextel and BAS licensees also have completed 22% of all FRA negotiations, a dramatic increase from last year.<sup>3</sup> The substantial progress in the first relocation stages, along with intensive efforts to address the unanticipated complexities of BAS relocation, has now laid the foundation for the parties to accelerate the pace of FRA negotiations.

The following map shows the geographic scope of the project and the status of each designated market area (DMA), as determined by the least advanced station.

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<sup>3</sup> This figure includes 192 signed FRAs and 35 BAS licenses that cancelled their licenses because the broadcaster no longer needs them.

## 2 GHz Relocation Progress by DMA



Sprint Nextel has now completely transitioned the Yuma, Arizona and Lima, Ohio DMAs to the new 2 GHz band plan.<sup>4</sup> These two successful transitions provide real-world evidence that the new BAS equipment operating on the new band plan will meet broadcasters’ electronic news gathering (ENG) needs, and that relocation can occur without undue disruption to broadcast operations. The successful transition of Yuma and Lima provides reassurance to other BAS licensees and adds momentum to negotiating FRAs and completing relocation throughout the country. The following chart shows the progress Sprint Nextel has made in several major-market DMAs. In these markets, the vast majority of licensees have submitted their cost quotes and substantial numbers of licensees have signed FRAs.

<sup>4</sup> There are also eight markets that have no BAS licensees: Parkersburg, WV; Helena, MT; Glendive, MT; Fairbanks, AK; Bowling Green, OH; Zanesville, OH; Alpena, MI; and Mankato, MN. Accordingly, a total of ten markets have relocated to the new 2 GHz band plan.

<b>Package of Quotes (“Deal Packages”) Submitted</b> <i>Phase 4 Progress</i>	<b>Frequency Relocation Agreements Executed</b> <i>Phase 5b Progress</i>
<b>New York</b>	<b>50%</b>
<b>Boston/ Providence</b>	<b>50%</b>
<b>Chicago</b>	<b>56%</b>
<b>Washington</b>	<b>71%</b>
<b>Orlando</b>	<b>57%</b>
<b>Houston</b>	<b>67%</b>
<b>Las Vegas</b>	<b>67%</b>

**III. Overview of BAS Relocation: Relocating BAS Licensees Has Proven to Be More Complicated Than Initially Anticipated**

In the new band plan, each BAS licensee will operate on twelve-megahertz channels as opposed to the seventeen-megahertz channels used in today’s BAS systems. Most licensees will need a significant redesign of their BAS systems and new digital equipment to operate on the narrower channels. At the same time, the Commission has stated that Sprint Nextel must take steps “to ensure that the BAS transition causes the minimum possible disruption to BAS operations.”<sup>5</sup> Accordingly, Sprint Nextel has developed an eight-phase relocation process in close consultation with the broadcast industry to achieve this objective:



<sup>5</sup> See Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, Second Report and Order and Second Memorandum Opinion and Order, 15 FCC Rcd. 12315, ¶ 42 (2000) (Second MSS R&O).

This process has successfully avoided disruption to ENG operations, but Sprint Nextel and the broadcast industry have encountered unanticipated complexities in almost every phase of relocation. The parties have worked to overcome these challenges and believe BAS relocation is now on track, although it will take longer to complete than 31.5 months.

Phase 1: *Market Kickoff*

Sprint Nextel initiates relocation in a DMA by conducting a “market kick-off” meeting with all BAS licensees in the DMA. During this meeting, Sprint Nextel provides BAS licensees an overview of the relocation process and discusses the relocation schedule for the DMA.

Phases 2 and 3: *Submit and Verify Inventory*

During the inventory stage, BAS licensees provide an inventory of their BAS station equipment. Sprint Nextel has developed an innovative, web-based inventory tool to assist the BAS licensees in accurately compiling and submitting this inventory. After the BAS licensee submits its inventory through the online tool, vendors retained by Sprint Nextel visit the BAS licensee and individually inspect each piece of BAS equipment owned by the licensee to verify this inventory and provide a report that includes photographic documentation and initial existing system diagrams.

Each BAS licensee operates a complex, integrated network of fixed and portable links scattered among a wide variety of different types of facilities and locations that licensees have assembled, piece-by-piece, over a period that might span several decades. These facilities, which are not often well documented with detailed technical schematics, vary greatly in location, use, accessibility, and upkeep, with many facilities having scores

of delicately integrated transmitters, receivers, antennas, controllers, and related equipment. Some of this equipment is 30 years old or older and can prove difficult to locate because it is used only occasionally or kept as a backup in a remote location. Other equipment is in near-constant use and requires special considerations to ensure continued operational readiness. Often BAS equipment is located in difficult to reach places – on towers, on rooftops, in vans, in helicopters, and even on devices mounted on blimps. To inventory this equipment, Sprint Nextel and the licensee must use specially trained vendors who are in short supply (*e.g.*, tower climbers), and may also require local governmental approval prior to accessing.<sup>6</sup> Sprint Nextel and its vendors must closely coordinate inventory verification visits with the licensee to ensure that its engineering staff is present during the visit. This coordination in itself can cause delays because the engineering staff may not be physically located at a particular facility, and often have busy, unpredictable schedules given the nature of a licensee’s news-gathering operations.

Phases 4a and 4b: *Submit and Approve Quotes*

Following submission of a licensee’s inventory, Sprint Nextel works with the licensee to establish its internal cost of relocation using spreadsheets developed by Sprint Nextel. To permit broadcasters to select their own equipment, broadcasters must provide final quotes from vendors without any modifications, alterations or deletions for all equipment and external services needed for the relocation. Sprint Nextel reviews these quotes and works with the licensee to help ensure that the reimbursed costs are reasonable and prudent.

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<sup>6</sup> Sprint Nextel also requires all of its vendors to carry a standard minimum insurance amount of both General Liability and Umbrella Liability business insurance.

As noted, BAS licensees use a wide variety of equipment and system designs to provide a range of ENG functions. Sprint Nextel and each licensee often must spend considerable time consulting with manufacturers and other vendors regarding how best to replace this equipment and redesign the licensee's BAS system to operate on the new band plan. The parties must discuss what constitutes "comparable" equipment based on the Commission's comparable facilities policies. It can take weeks, even months, to identify, explore and resolve these issues and for the licensee to settle on the basic design of its replacement facilities and the manufacturer and vendors it will use. All of these activities must occur before the broadcaster can submit its quotes and Sprint Nextel can approve them.

Local Television Transmission Service (LTTS) operators provide an example of the unanticipated complexities that can arise at this stage. LTTS operators use customized equipment and specialized network set-ups to provide video coverage of sports events and other programming (*e.g.*, the Masters golf tournament, the national political conventions) for the broadcast networks and cable networks such as ESPN.<sup>7</sup> Much of the equipment LTTS operators use is not "off the shelf." Indeed, in some cases the LTTS operator itself has designed and procured custom-made equipment to suit its particular service.<sup>8</sup> Sprint Nextel has worked closely and successfully with LTTS operators to understand these equipment demands and develop replacement equipment options consistent with the Commission's comparable facilities policies.<sup>9</sup> The LTTS

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<sup>7</sup> SBE Decl. ¶¶ 4-5.

<sup>8</sup> *Id.* ¶ 5.

<sup>9</sup> *Id.*

transition to the new band plan is on track, but it has taken an extensive amount of time to hammer out these details and avoid disrupting LTTS operations.

Phase 5: Negotiate Frequency Relocation Agreements

As the parties work through the inventory and quote stages, Sprint Nextel's regional BAS relocation team initiates FRA negotiations with each licensee. The FRA relies upon the equipment inventory that Sprint Nextel and the broadcasters jointly assemble and the quotes that the broadcasters develop; the FRA explains the cost reimbursement plan and the parties' mutual responsibilities in relocating the licensee to comparable facilities. The FRAs must also be consistent with Sprint Nextel's role as essentially a steward of funds dedicated to the U.S. Treasury, which requires Sprint Nextel to fund only appropriate BAS relocation costs consistent with the Commission's comparable facilities policies and Sprint Nextel's obligation to make a "true-up" payment to the U.S. Treasury at the end of 800 MHz reconfiguration.<sup>10</sup>

Sprint Nextel and BAS licensees have cooperated to overcome a number of complications and delays that developed early in the FRA negotiation process. For example, early in the process, a number of broadcast parties raised concerns about potential income or property tax liability broadcasters might incur as a result of receiving new digital BAS equipment. Although the Commission's rules and policies do not require Sprint Nextel to fund or indemnify these potential liabilities,<sup>11</sup> Sprint Nextel successfully worked with the broadcast industry to find ways to address these concerns.<sup>12</sup>

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<sup>10</sup> 800 MHz R&O ¶¶ 252, 330.

<sup>11</sup> See Letter from Regina Keeney, Counsel to Sprint Nextel, to Marlene Dortch, FCC Secretary (March 22, 2006). (Unless otherwise indicated, all filings referenced in this Report were filed in WT Docket No. 02-55.)

<sup>12</sup> See *infra* Section V.

Sprint Nextel also spent considerable time early in the process working with MSTV, NAB, and other broadcast representatives to develop a model FRA for use as a starting point for individual licensee negotiations.

Other complications can arise. Some BAS licensees have decided that they should take the opportunity created by BAS relocation to upgrade their facilities to expand their ENG capabilities. Upgrading equipment is perfectly permissible and sensible in the context of an overall reworking of an ENG system. At the same time, the negotiation of new upgraded equipment and features can lead to challenging negotiations with the manufacturers about how best to redesign the complex network of interrelated BAS equipment. Sprint Nextel and the BAS licensee must also determine the portion of the new equipment and installation costs attributable to BAS relocation and therefore compensable by Sprint Nextel, versus costs attributable to obtaining better facilities, which the station must fund. In addition, the licensee must go through its own budgeting process to finance these extra expenditures.<sup>13</sup> Completing this process introduces additional time before the parties can finalize an FRA.

After the parties sign an FRA, Sprint Nextel and the BAS licensee often must negotiate amendments to their agreement. In the typical case, the parties begin implementing the FRA only to discover that a piece of equipment was missed during the inventory stage, or that the relocation must be implemented differently than initially planned. This requires the parties essentially to “restart” the inventory/quote stages and to amend the FRA. Most FRAs have required two amendments after they have been signed and, even relatively commonplace missteps, such as misstating the legal name of

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<sup>13</sup> Noncommercial stations and smaller stations can face special challenges in raising these additional funds, which requires even more time to address.

the party signing the agreement, the Taxpayer Identification Number (TIN), or the corporate name on a bank account can impede transition progress.

The sheer volume of paper that this process generates shows just how complex and resource-intensive an undertaking this is. Each FRA averages about 35 pages, and each amendment averages about 7 pages. At roughly 50 pages per FRA (counting the typical two amendments) and 1000 licensees to transition, Sprint Nextel and the BAS industry collectively will produce roughly 50,000 pages of FRAs – or, stated differently, a stack of legal documents roughly two stories high. Behind every page stand multiple lawyers, broadcast engineers, program managers, and many others negotiating these often complex transactions. Sprint Nextel has added a deal processing team to ensure timely and accurate review, approval, and execution. Sprint Nextel has also adopted a new “change order” process to permit broadcasters to make minor changes to the FRA without reopening the entire FRA to re-negotiation and re-execution. These steps have further accelerated the FRA execution process.

Phases 6a, 6b, and 7: *Submit/Fulfill Orders and Installation*

Upon execution of the FRA and any necessary amendments, Sprint Nextel and the BAS licensee place orders for the necessary equipment and vendors install the equipment. BAS licensees retain control over the installation at all times.

As discussed in Section IV.A, Sprint Nextel has pre-funded the production of a large amount of replacement equipment inventory to implement relocation. Sprint Nextel’s pre-funding the production of inventory has avoided costly delays, but manufacturers still require twelve to sixteen weeks to process each order, assemble each system, test the equipment to ensure the components function together and the system

meets the licensee's needs, and ship the equipment. Many of these shipments are exceptionally large – as many as twelve, six-foot square crates.

As with the inventory stage, the BAS licensee often must contract with vendors who possess specialized training to work on high towers or other inaccessible areas. There is a shortage of such vendors, especially given the competing demands on their time created by the digital conversion of a licensee's main broadcast facilities to comply with Congress's digital television mandate.<sup>14</sup> The vendors must also schedule their work to avoid disruption to the licensee's ENG operations. This requirement means that installations must occur on weekends late at night and cannot take place during broadcasters' sweeps periods, elections, major news and sporting events (on both national and local levels), and on holidays.

Discounting for the blackout dates when ENG activity is at its peak, Sprint Nextel has, on average, approximately thirty-five weekends during which installation can occur. Within these limited retune opportunities, bad weather can force the vendor to postpone an installation because it is dangerous to climb a high tower in windy or inclement conditions. Delay can also occur when vendors or the broadcaster discovers during the installation process that a different part or piece of equipment is needed. BAS licensees have also encountered delays in obtaining local zoning approvals that are necessary to complete the installation of their replacement facilities.

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<sup>14</sup> See 47 U.S.C. § 309(j)(14)(A), as amended by § 3006(a) of the Digital Television Transition and Public Safety Act of 2005, Title III of the Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4 (2006) (establishing February 17, 2009 as the "hard date" for the digital television transition).

Phase 8: Market Relocation

Even after completing all of the earlier phases, a BAS licensee cannot generally transition to the new 2 GHz band plan until all licensees in its market are ready to do so. BAS licensees within a market share spectrum channels, and the Commission has recognized that “the integrated nature of BAS operations . . . makes isolated, link-by-link relocation infeasible.”<sup>15</sup> As a result, Sprint Nextel can only retune a market to the new band plan after all BAS licensees enter into FRAs with Sprint Nextel and are ready to transition to the new band plan at the same time.<sup>16</sup> In addition, in many markets Sprint Nextel and BAS licensees must coordinate relocation with adjacent DMAs because of inter-market sharing and interference issues.<sup>17</sup> Sprint Nextel, with input from the broadcast industry, has grouped DMAs into clusters, with each cluster representing a group of DMAs that are in close geographic proximity and that Sprint Nextel needs to relocate during the same stage because of DMA interdependencies.<sup>18</sup> As with the installation phase, Sprint Nextel and BAS licensees must coordinate a DMA’s final relocation to the new band plan to account for each broadcaster’s ENG demands (*e.g.*, sweeps week, covering late-breaking news events).

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<sup>15</sup> 800 MHz R&O ¶ 256.

<sup>16</sup> Prior to this coordinated, market-wide switch to the new band plan, BAS licensees will follow a “narrow-in-place” protocol: each user on its own schedule will deploy new equipment that enables operation on 12 MHz channels, while continuing to operate on the existing channel center frequencies until all licensees in the market are ready to switch to the new band plan.

<sup>17</sup> Sprint Nextel BAS Relocation Schedule and Implementation Plan at 4-5 (April 6, 2005) (2005 Implementation Plan).

<sup>18</sup> *See id.*

All Phases: Regulatory Uncertainty

Regulatory uncertainty has also made BAS relocation more complex and caused delays. In its March 2006 Report, Sprint Nextel described uncertainty over a number of regulatory issues, including reimbursement eligibility for certain categories of BAS licensees that remain pending before the Commission.<sup>19</sup> Since then, some BAS licensees have encountered delays in obtaining local zoning approval to make tower and other facility modifications to implement the BAS relocation.

The broadcast industry and Sprint Nextel are also concerned about unanticipated international border area issues. For example, Industry Canada appears to have taken the position that relocating a BAS station from the old BAS channel plan to the new BAS channel plan constitutes a “new” frequency use, and therefore requires both notice to and approval by Canadian regulatory authorities.<sup>20</sup> This significantly complicates BAS relocation along the Canadian border and could potentially cause substantial delays beyond the control of the broadcast industry and Sprint Nextel. To avoid these delays, the Commission staff should request that Industry Canada treat relocation of BAS

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<sup>19</sup> Sprint Nextel BAS Relocation Status Report at 19-20 (March 7, 2006) (2006 Report). The Commission has not yet addressed petitions for reconsideration filed by a number of broadcast parties regarding whether low power television stations and television translator stations are eligible for reimbursement. *See, e.g.*, Mohave County Board of Supervisors, Petition for Clarification or Reconsideration (Jan. 27, 2006); Association for Maximum Service Television, Inc., Petition for Clarification (Jan. 27, 2006); Fox Television Stations, Inc., Petition for Clarification or Reconsideration (Jan. 27, 2006); KTVK, Inc., Petition for Clarification or Reconsideration (Jan. 27, 2006); Meredith Corporation, Petition for Clarification or Reconsideration (Jan. 27, 2006); Multimedia Holdings Corporation, Petition for Clarification or Reconsideration (Jan. 27, 2006); Scripps Howard Broadcasting Company, Petition for Clarification or Reconsideration (Jan. 27, 2006).

<sup>20</sup> SBE Decl. ¶ 6.

facilities to the new band plan as “grandfathered” and therefore not subject to notification and approval requirements.<sup>21</sup>

#### **IV. Sprint Nextel Is Diligently Working with All Stakeholders to Expedite BAS Relocation**

As discussed above, Sprint Nextel is devoting substantial resources to transition BAS licensees to the new 2 GHz band plan as quickly and efficiently as possible. Sprint Nextel has a strong incentive to enter into FRAs and relocate BAS licensees as soon as possible given that, until this happens, it will not have access to the 1.9 GHz G Block spectrum.<sup>22</sup> Sprint Nextel further recognizes its BAS relocation obligations under the *800 MHz R&O*, and is taking all steps within its control to satisfy these obligations.

As reported last year, BAS relocation started slowly due to complex disputes over taxation and relocation agreements.<sup>23</sup> While these issues and other factors beyond the control of any one party to the transition will result in the parties being unable to complete all BAS relocations by September 7, 2007 as originally anticipated, the parties settled within the last twelve months all material legal disputes — a major accomplishment representing an enormous amount of time and money. Having now eliminated all major obstacles to the transition, Sprint Nextel and the broadcast industry are completing the reconfiguration of the 2 GHz BAS band rapidly without undue disruption to broadcasters’ ENG operations.

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<sup>21</sup> *Id.* ¶ 7.

<sup>22</sup> *800 MHz R&O* ¶ 222 (recognizing the importance of providing Sprint Nextel’s “timely and certain access to 1.9 GHz spectrum rights in exchange for vacating certain 800 MHz spectrum and assuming the cost of 800 MHz band reconfiguration”).

<sup>23</sup> This slow start during the first year of BAS relocation resulted in the execution of only a handful of FRAs during the first year of BAS relocation. *See* 2006 Report at 18.

**A. Working with BAS Equipment Manufacturers and Other Vendors**

Sprint Nextel has taken concrete steps to help ensure manufacturers and service vendors supply a sufficient amount of equipment and services to accommodate BAS relocation. In the years preceding the start of BAS relocation, BAS manufacturers did not produce high volumes of BAS equipment, but instead scaled their operations to the much lower volumes needed to replace aging equipment in a stable and mature industry. The Commission's BAS relocation schedule has presented most of them with significant challenges to meet anticipated demand. Thus far, Sprint Nextel has spent more than \$186 million in pre-stocking orders and continues to place orders and to commit additional funds to encourage the primary BAS manufacturers to ramp-up capacity and build an inventory to meet demand, which far exceeds their normal yearly production levels. These expenditures have resulted in an inventory of more than 12,000 pieces of replacement equipment, including more than 6,000 transmitters and receivers, more than 4,000 controllers, and nearly 2,000 antennas and antenna upgrades.

In response, BAS manufacturers and system integrators have ramped up their capabilities, as the attached declarations from three leading BAS manufacturers and system integrators demonstrate. One manufacturer, Nucomm, has increased the size of its workforce from 60 to 110 employees; expanded the square footage of its production facilities by 50%; and increased its inventory of BAS equipment by tens of millions of dollars.<sup>24</sup> Another manufacturer, MRC, has increased its workforce by over 40%; acquired substantial new manufacturing, research and development, and warehouse space; and added new subcontractors and expanded existing relationships to supply BAS

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<sup>24</sup> Nucomm Decl. ¶ 4.

components.<sup>25</sup> DSI RF Systems, a system integrator, has expanded its workforce and added overflow capacity by hiring new employees; expanded its reliance on an existing network of approximately 30 subcontractors; and increased its square footage of available warehouse space.<sup>26</sup> Manufacturers and integrators have also expanded their testing and verification facilities to permit pre-assembly and unified testing of complete systems, and hosted training sessions and seminars regarding the new equipment.<sup>27</sup> By expanding their production and testing facilities and coordinating with Sprint Nextel and other stakeholders, a number of manufacturers and integrators have taken steps to promote a seamless and expeditious BAS relocation.

Moreover, BAS equipment manufacturers and system integrators have worked in partnership with Sprint Nextel to develop entirely new ways of providing their services, *reducing the historical “change order” rate by fifty percentage points and dramatically improving the efficiency of BAS relocation.*<sup>28</sup> Specifically, BAS equipment manufacturers and systems integrators have developed new business protocols to aid in the transition, including detailed checklists for inventorying existing facilities, identifying comparable replacement equipment, and integrating a BAS licensee’s “new” and “old” systems.<sup>29</sup> Using these protocols, regional sales managers and systems engineers from the manufacturers work with each customer to develop replacement or modified BAS equipment that will meet the customer’s particular needs. As a result, they have been far better able to identify and “troubleshoot” integration and installation errors before

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<sup>25</sup> MRC Decl. ¶ 4.

<sup>26</sup> DSI Decl. ¶ 5.

<sup>27</sup> MRC Decl. ¶ 5; Nucomm Decl. ¶ 5; DSI Decl. ¶ 8.

<sup>28</sup> MRC Decl. ¶ 6.

<sup>29</sup> MRC Decl. ¶¶ 5-6; DSI Decl. ¶ 6.

shipment. Although implementing these protocols has required additional manpower (and in-house training), the new approach has already yielded dramatic results. Prior to the transition, for example, roughly 80% of the BAS equipment that MRC produced would require post-order modification to meet standard performance objectives. Faced with the prospect of post-production changes to tens of thousands of pieces of equipment, Sprint Nextel and MRC realized that an 80% change order rate would result in intolerable delays to the transition process. Therefore, MRC, in close collaboration with Sprint Nextel, has reinvented its business process so that only roughly 30% of MRC's BAS equipment require post-production modification.<sup>30</sup> Reducing the incidence of BAS-related change orders to a fraction of what would normally be expected has helped minimize delays that would otherwise plague the relocation process.

Sprint Nextel has worked with manufacturers to develop new technology and features that will facilitate BAS relocation. Because of these efforts, new BAS equipment will have analog redundancy in digital radios so that the broadcasters have fallback technology built into the new radio should the digital portion of the radio fail. Sprint Nextel was instrumental in ensuring that manufacturers will provide replacement equipment capable of remote-controlled transition from "narrow-in-place" operation to operation on the new band plan; this will make a BAS market's transition to the new band plan more efficient and expeditious.<sup>31</sup> Sprint Nextel also insisted that manufacturers provide broadcasters with at least a one-year warranty on all new equipment.

Sprint Nextel, in concert with the broadcast industry, has helped assess the functionality and comparability of the new digital equipment. A number of broadcasters

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<sup>30</sup> MRC Decl. ¶ 6.

<sup>31</sup> See *supra* note 16.

have conducted field tests using the new equipment, and these successful tests have provided reassurance of the comparability of this equipment. Sprint Nextel has posted the results of these tests on its BAS relocation website.<sup>32</sup> It has also assisted the broadcast industry in arranging meetings among broadcast engineering leadership, BAS equipment manufacturers, and Sprint Nextel to discuss technical issues. These efforts promote a better understanding of how various BAS system components will need to be modified or replaced in the transition to the new band plan.

### **B. Outreach and Coordination**

As explained in its 2006 BAS Report, from the outset Sprint Nextel conducted extensive outreach efforts to educate BAS licensees about the relocation process and help them adjust to the changes associated with relocation to the new band plan. Sprint Nextel has established a web site – [www.2ghzrelocation.com](http://www.2ghzrelocation.com) – that provides information and background about BAS relocation. In addition, early in the BAS relocation process Sprint Nextel teams met with groups of broadcasters in over 20 different television markets and made presentations at the NAB convention and meetings of local broadcast groups. These outreach efforts provided background and an overview of the BAS relocation process for hundreds of BAS licensees throughout the country. Sprint Nextel has also enlisted a new training coordinator, Azcar Technologies, to provide broadcasters with flexible, appointment-based training on how to operate their new equipment. Azcar offers satellite-based distance learning with an audio and video backchannel for interactive learning that gives access nationwide to the same experienced instructors without the need for specific appointment times or market-wide delays.

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<sup>32</sup> See <<http://www.2ghzrelocation.com/plugin/template/broadcast/technology%20updates>>.

To further accelerate the transition process, Sprint Nextel continues to consult with NAB, MSTV, and SBE. These parties began working together on BAS relocation even prior to the adoption of the *R&O*. These efforts led to the parties' May 3, 2004 Joint Proposed BAS Relocation Plan, which the Commission adopted in the *800 MHz R&O*.<sup>33</sup> Sprint Nextel also consulted with these groups in developing its BAS implementation plan, filed with the Commission on April 6, 2005.<sup>34</sup>

Recognizing that the MSS relocation proceeding is a separate, but related undertaking, Sprint Nextel has been working with MSS satellite operators, such as TerreStar, to assist in accelerating the transition.<sup>35</sup> For example, representatives of TerreStar and Sprint Nextel meet every two to three weeks to coordinate their efforts.

### **C. Audit and Cost Control Measures**

Sprint Nextel has established a robust audit system to demonstrate the basis for reimbursed BAS relocation costs. These measures include, among other things, documenting and verifying the inventory of BAS equipment that will be replaced or upgraded, establishing a process for obtaining and reviewing quotes and purchase orders for equipment and services, and requiring BAS licensees to ship replaced equipment to Sprint Nextel for recycling. As required by the Commission, Sprint Nextel has retained the national accounting and auditing firm KPMG to audit BAS relocation costs. These measures are consistent with Sprint Nextel's role as a steward of funds dedicated to the

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<sup>33</sup> See Joint Proposed BAS Relocation Plan filed by MSTV, NAB and Nextel (May 3, 2004); Comments of SBE (May 7, 2004) (expressing support for joint proposal); *800 MHz R&O* ¶ 252.

<sup>34</sup> 2005 Implementation Plan.

<sup>35</sup> See *800 MHz R&O* ¶ 257; *800 MHz MO&O* ¶ 114.

U.S. Treasury because of the “true-up” process the Commission has established at the end of 800 MHz reconfiguration.<sup>36</sup>

**V. MSTV, NAB, and SBE Have Shown Strong Leadership in Moving BAS Relocation Forward**

The large majority of BAS licensees have worked in good faith with Sprint Nextel to address the many complexities of BAS relocation and to move the process forward. MSTV, NAB and SBE have shown strong, effective leadership in representing broadcasters. For example, MSTV and NAB, working closely with Sprint Nextel, coordinated industry-wide discussions that led to a baseline list of compensable BAS equipment. This list figures into the web-based inventory tool on Sprint Nextel’s BAS relocation website and has helped streamline the inventory stage, as evidenced by the increase in inventories submitted, verified and agreed upon in the past year.

As noted, MSTV, NAB, and individual broadcast licensees worked with Sprint Nextel to develop a template FRA that would serve as a starting point for relocation negotiations. These parties negotiated to create a revised template that since has proven acceptable to BAS incumbents holding a majority of BAS licenses. The broadcast industry also endeavored to resolve the tax liability issue, filing a petition with the IRS for an expedited private letter ruling that stations would not owe taxes on replacement BAS equipment. Sprint Nextel supported the request for a ruling, and on July 28, 2006, the IRS issued the ruling (No. 2006-44019), determining that the property exchange mandated by the BAS relocation was an involuntary conversion and therefore would not result in the recognition of any income or gain.

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<sup>36</sup> 800 MHz R&O ¶¶ 252, 330.

MSTV, NAB and SBE have worked diligently to reach out to and educate their members about the relocation. They have communicated regularly with the industry regarding relocation tasks and deadlines. The upcoming April 2007 NAB convention is the most recent example of these outreach efforts. The convention will feature an interactive learning session, which will allow BAS licensees to stay up-to-date on the latest technologies, learn how these technologies will affect BAS operations, and hear how other broadcasters have addressed the technical challenges of retuning. All of these efforts have greatly contributed to the strong progress made in the last year toward completing BAS relocation.

## **VI. Conclusion**

Although the complexities of BAS relocation caused delays during the first two years of the process, Sprint Nextel and the broadcast industry have made strong progress during the past year. The BAS relocation project – an undertaking involving tens of thousands of pieces of costly fixed and mobile equipment assembled into a series of discrete networks that can cross multiple geographic areas – has proven far more complex than originally anticipated. Despite the best efforts of all parties involved during the last year, unforeseen, unavoidable complications in the transition have impeded progress in transitioning all DMAs by the originally anticipated date. While Sprint Nextel has successfully transitioned facilities in two DMAs – Lima, OH and Yuma, AZ – neither DMA is representative of the more complex major markets or the country as a whole. By adding staff, increasing warehouse space, storing up inventories, developing templates, and streamlining processes at every level, Sprint Nextel has invested heavily to ensure that, once underway, the remaining DMAs move far more

quickly than originally scheduled. After consultation with its BAS equipment vendors, integrators, contractors, satellite operators, and the broadcast community, Sprint Nextel anticipates requiring an additional twelve to twenty-four months to complete the BAS transition. Sprint Nextel will continue to work diligently and in good faith with all parties involved to complete BAS relocation as quickly and efficiently as possible.

Respectfully submitted,

SPRINT NEXTEL CORPORATION

/s/ Robert S. Foosaner

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*Counsel to Sprint Nextel Corporation*

March 7, 2007

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket 02-55
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	
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	)	ET Docket No. 00-258
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service	)	ET Docket No. 95-18
	)	

**DECLARATION OF JOHN DULANY ON BEHALF OF NUCOMM INC.**

I, John Dulany, hereby declare as follows:

1. My name is John Dulany and I have been with Nucomm Inc. ("Nucomm") since its inception in August of 1990. I started with the company as Customer Service Manager. After serving nine years as Service Manager, I moved into the Sales Department where I served as Regional Sales Manager for three years and Director of International Sales for two years. I was promoted to my current position, Director of Sales and Marketing, in April of 2005.
2. Located in Hackettstown, New Jersey, Nucomm is a manufacturer of premier digital and analog video microwave systems for the military, law enforcement, telecommunications and cable television industries. Products manufactured by Nucomm

include COFDM wireless camera systems, digital electronic news gathering (“ENG”) transmit and receive systems and fixed microwave systems for point to point studio-to-transmitter link, transmitter-to-studio link and intra-city relay applications. From its inception in 1990, Nucomm has been a leader in product research, development and manufacturing, introducing products with features, technologies, and capabilities never before offered in microwave transmitters and receivers.

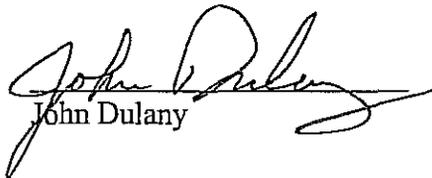
3. At Sprint Nextel’s recommendation that Nucomm develop sufficient capacity to ensure that it would be able to meet the anticipated demand for new BAS equipment, the company took a number of steps to expand its production capabilities. Foremost, in April 2005, Nucomm partnered with Comtech EF Data (“Comtech”), a prominent high-volume manufacturer of sophisticated radio frequency/microwave equipment for satellite communications. Located in Tempe, Arizona, Comtech has a market cap of over \$500 million and a staff of several hundred employees. By entering into this partnership, Nucomm obtained access to extensive production facilities and additional human resources that greatly expanded its manufacturing capabilities.

4. Over the same period, Nucomm increased its Hackettstown, New Jersey facility workforce by over 80%, from 60 to 110 employees, and expanded the square footage of its Hackettstown production facility by 50% to further accommodate the anticipated spike in BAS orders. As a result of these activities, Nucomm has been able to accelerate its weekly production of portable transmitter and receiver systems several-fold, from approximately 5 systems to 30-40 systems per week. Nucomm currently has in stock several tens of millions of dollars worth of BAS equipment, and is adding more inventory each week.

5. Nucomm has worked closely with Sprint Nextel to ensure that the new BAS systems will interact with existing equipment. In addition to testing new equipment on a stand-alone basis, Nucomm has expanded its testing and verification areas to permit high volume testing and integration of complete BAS systems. Nucomm has expanded its customer service support facilities and tripled the number of customer service support personnel available to assist licensees on a case-by-case basis with the BAS relocation. Nucomm also has hosted training sessions and seminars for BAS integrators and installers, and has made its test areas available for training and troubleshooting of the new BAS systems.

6. Nucomm believes that its expanded production facilities and increased coordination with Sprint Nextel and other stakeholders have helped speed the BAS relocation, and that these proactive efforts will help ensure that the rest of the transition will proceed quickly and seamlessly.

I, John Dulany, declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct to the best of my knowledge and belief.

  
John Dulany

Executed on March 7, 2007

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket 02-55
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	
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	)	ET Docket No. 00-258
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service	)	ET Docket No. 95-18
	)	

**JOINT DECLARATION OF JOSEPH GIARDINA AND TIM CARROLL  
ON BEHALF OF DSI RF SYSTEMS, INC.**

We, Joseph Giardina and Tim Carroll, hereby declare as follows:

1. My name is Joseph Giardina. I have been the Chief Technology Officer and owner of DSI RF Systems, Inc. ("DSI") for the past 20 years. I have over 25 years of experience in broadcast station engineering, facilities design and construction. I am a member of the Institute of Electrical and Electronic Engineers and the Society of Motion Picture and Television Engineers, and I have been certified at the level of Senior Television Broadcast Engineer by the Society of Broadcast Engineers.
2. My name is Tim Carroll. I am currently the President of DSI, which has provided engineering solutions to the broadcast industry for over 20 years. In this capacity, I am

responsible for overseeing the day to day operations of the company. I joined DSI in 1986 as the Vice President of Sales and Marketing and was named President in 1994. I graduated from the University of Maryland with a BA in Radio, Television, and Film.

3. DSI provides design and installation services for transmitter facilities, microwave systems, and remote control camera networks, and offers both scheduled and emergency maintenance services for transmitter and camera systems. Through exposure to a vast scope of projects, and ongoing in-house education programs, DSI has developed a well-rounded set of proficiencies to provide customers with expert service in the latest broadcast technologies. DSI staff is trained to handle projects from start to finish and is prepared to meet a variety of engineering challenges. DSI's customers include CNN, NBC, CBS, ABC, and Bristol Myers Squibb.

4. With almost 20 years' experience installing electronic news gathering ("ENG") systems, DSI has been involved in the 2GHz Broadcast Auxiliary Service ("BAS") relocation from its initial stages. Early on, DSI was awarded a contract from Sprint Nextel to provide third-party inventory verification services for the relocation. DSI's verification teams are well versed in ENG systems and, to date, have verified over 150 television stations on the East Coast.

5. In order to prepare for the anticipated increase in demand for BAS installers and equipment integrators, DSI has coordinated with Sprint Nextel to expand its workforce and add overflow capacity. DSI has increased its full-time workforce from 12 to 20 and expanded its reliance on an existing network of approximately 30 subcontractors. As discussed more fully below, DSI has made 10,000 square feet of warehouse space available

for verification, pre-testing, and storage of new BAS equipment pending site installation, and has trained its staff regarding use of the new technology.

6. DSI has assisted in the inventory stage of the relocation process by identifying BAS equipment (including ancillary devices) that must be replaced and preparing inventory reports for submission to Sprint Nextel. The process of submitting and verifying these inventories has taken longer than expected for a variety of reasons: the equipment is often stored in multiple locations, is older, or is used only rarely (*e.g.*, spare equipment) or on a seasonal basis. In order to streamline the inventory verification process, DSI has developed a standard checklist of questions aimed at identifying all BAS equipment eligible for replacement, including seasonal and spare equipment, and any equipment that might be stored at different locations.

7. The integration and installation process also has been complicated by a host of unforeseen problems: software glitches, incomplete or unverified shipments, bad weather, and missing parts all have caused installation delays. Although many of these problems, viewed individually, may seem relatively insignificant, in the context of several hundred installations, they have the ability to create a “ripple” effect, with failure to complete installations in one market spilling over to delay the start date of the next target market. As discussed below, in conjunction with Sprint Nextel, DSI has developed improved systems and processes to address these problems, where practicable.

8. Many stations do not have loading docks or storage facilities, and thus are ill-equipped or unable to unload, verify, and store the new equipment pending installation. DSI thus offers stations the option to arrange for replacement equipment to be shipped directly to DSI’s warehouse. In those cases, DSI unpacks, visually inspects, and verifies

that the shipment is complete. It then pre-assembles and pre-tests the equipment, and stores it pending installation. As the installation date approaches, DSI reships the equipment to the station, along with an “installation toolkit” containing extra cables and other spare parts. This process enables DSI to ensure that all system components and materials necessary for the installation have been received and tested as a unit prior to the installation date, thereby avoiding delays or problems that might otherwise arise in the field.

9. In sum, in coordination with Sprint Nextel, DSI has increased its size, developed master checklists, and expanded its testing and verification capabilities in response to the anticipated increase in demand for its services due to the BAS relocation. Based on its 20-plus years of experience in the industry, DSI believes that these proactive solutions, or “debugging” of the existing processes, will greatly streamline implementation of the relocation in the coming months.

I, Joseph Giardina, declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct to the best of my knowledge and belief.

  
Joseph Giardina

Executed on March 5, 2007

I, Tim Carroll, declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct to the best of my knowledge and belief.

  
Tim Carroll

Executed on March 5, 2007

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket No. 02-55
	)	
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	
	)	
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	)	ET Docket No. 00-258
	)	
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service	)	ET Docket No. 95-18
	)	

**DECLARATION OF DANIEL MCINTYRE ON BEHALF OF MRC**

I, Daniel McIntyre, hereby declare as follows:

1. My name is Daniel McIntyre. I am employed by Microwave Radio Communications ("MRC") as Vice President, a position I have held since 2000. My current responsibilities include handling various aspects of the relocation of Broadcast Auxiliary Service ("BAS") licensees to the new band plan at 2 GHz. Prior to joining MRC as a Vice President of Sales in 2000, I was employed by IBM as Director of Networking Services Marketing and Director of Telecommunications Services Marketing.
2. Located in N. Billerica, Massachusetts, MRC is the leading manufacturer of microwave systems for television operations worldwide and a key supplier for U.S.

public safety and military operations. With more than 40 years' experience, MRC has developed expertise in the design and manufacture of innovative microwave solutions. Today, MRC has the largest installed base of video microwave products in the world and is the nation's largest manufacturer of BAS equipment.

3. The BAS relocation involves retuning nearly 1,000 broadcast stations from channels consisting of between 16.5 and 18 megahertz to narrower 12 megahertz channels in the 2025-2110 MHz band. In order to accommodate the challenges posed by an undertaking of this size and complexity, MRC has coordinated with Sprint Nextel to significantly expand production capabilities and modify many of its business practices.

4. MRC has increased the number of its employees by over 40% to handle various aspects of the BAS retuning, and added new subcontractors and expanded existing relationships to help meet the anticipated increase in demand for BAS equipment. MRC has increased inventory of "ready to ship" stock; acquired substantial new manufacturing, research and development, and warehouse space; and extended its technical support and customer service hours. In response to the need to evolve and improve the design of its BAS products, MRC's parent, Vislink plc, acquired a prime technology supplier, Link Research Ltd., which owns the intellectual property rights to state-of-the-art digital coding and decoding technologies.

5. The retuning has raised unique operational and technical issues for many stations, in part because of the complexity of their existing systems, many of which had been incrementally customized and upgraded over the prior 30 years. As a result, MRC has found it necessary to coordinate closely with each station regarding the various aspects of the transition, including helping troubleshoot potential issues that might arise from

combining a station's "old" infrastructure with its new BAS system. MRC has expanded its testing processes to permit "staging" of complete systems and unified testing of all component pieces, down to the level of a given length of interconnection cable. It has also increased its use of automated testing and verification. Having replaced some of MRC's manual testing and verification procedures with more automated processes, as well as implementing unified system testing processes, has increased MRC's efficiency and enhanced its ability to ship operational systems in a timely manner.

6. MRC has worked with Sprint Nextel to develop new business protocols, including detailed checklists for inventorying existing equipment and identifying comparable replacements, to help speed the transition. Although implementing these protocols has required additional manpower (and in-house training), the new approach has already yielded dramatic results. For example, MRC's regional sales managers and systems engineers work with each customer to help it develop a new system that will meet its particular needs. As a result of these efforts, recent results indicate that less than 30% of MRC's BAS purchase orders have required modification (or a "change order") after issuance; in comparison, greater than 80% of MRC's regular (non-BAS) purchase orders have required change orders historically. Reducing the incidence of BAS-related change orders by more than 60%, as compared to the historical average, has helped minimize delays that would otherwise plague the relocation process.

7. MRC believes that the steps it has taken in coordination with Sprint Nextel in the past year have helped streamline the BAS retuning effort. MRC is confident that these efforts will promote a faster, more efficient transition, even as orders for comparable facilities and their integration and installation begin to ramp-up in the near future.

I, Daniel McIntyre, declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct to the best of my knowledge and belief.

  
Daniel McIntyre

Executed on March 6, 2007

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket 02-55
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
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	)	

**DECLARATION OF CHRISTOPHER H. SCHERER ON BEHALF OF  
THE SOCIETY OF BROADCAST ENGINEERS**

I, Christopher H. Scherer, hereby declare as follows:

1. I have been President of the Society of Broadcast Engineers ("SBE") for the past one and one-half years.
2. The Society of Broadcast Engineers is a non-profit professional organization founded in 1964 that is devoted to the advancement of all levels and types of broadcast engineering. SBE provides a forum for its more than 5,500 members to exchange ideas and share information. The society has 112 local chapters. One of the principal purposes of the SBE is to provide educational opportunities and training for our members. This is provided at the local and regional level through meetings, conferences and presentations;

and at the national level through seminars and other programs. The SBE also sponsors and promotes a frequency coordination program in which volunteers in broadcast markets across the country maintain and administer Broadcast Auxiliary Service (“BAS”) user and licensee databases, and provide coordination to users of shared, overloaded Part 74, 78 and 101 spectrum allocations. SBE’s frequency coordination program permits maximum frequency re-use by broadcasters, cablecasters, and video production entities that share scarce spectrum, and others who need to coordinate BAS frequency use. The program also facilitates electronic news gathering and local events, including, as examples, NFL football games and motorsports, and political conventions.

3. SBE has been working with the FCC, Sprint Nextel, the National Association of Broadcasters (“NAB”) and the Association for Maximum Service Television (“MSTV”) to facilitate the 2 GHz BAS transition. Early on, SBE worked with local volunteer frequency coordinators to arrange and facilitate meetings with broadcast engineers in more than a dozen major markets to introduce Sprint Nextel’s proposed relocation plan. SBE then worked in close cooperation with Sprint Nextel to conduct market “kick-off” meetings with BAS licensees and to coordinate relocation schedules based in part on SBE’s extensive knowledge of the issues in the relocation as the result of its experience in BAS frequency coordination. During these meetings, SBE and Sprint Nextel worked together to provide licensees in a given market an overview of the relocation process and the proposed relocation schedule. SBE continues to work with its members and Sprint Nextel to facilitate the BAS relocation.

4. In addition to Electronic News Gathering operations conducted by broadcasters, BAS spectrum in the 2 GHz band is also allocated to the Local Television Transmission Service (“LTTS”). LTTS licensees provide video coverage of sporting events and other

specialized programming (*e.g.*, golf tournaments, political conventions, automobile racing events, marathons, etc.) for broadcast, satellite and cable networks.

5. Although the number of LTTS licensees is relatively small compared to the number of BAS licensees, the LTTS relocation has proven complicated for several reasons. The larger LTTS licensee companies deploy custom equipment that has no comparable “off-the-shelf” replacement. Arriving at a fair replacement value for LTTS equipment, and creating replacement equipment also presented unusual challenges because in many cases the licensee had expended considerable unique costs to develop, design and manufacture much of its own equipment. As a result, it was not sufficient simply to prepare a paper inventory of LTTS equipment. It was necessary to develop a functionality test, whereby customized LTTS equipment is compared to off-the-shelf equipment capable of performing similar functions. This information, along with off-the-shelf pricing information, has been used to approximate a fair market value for comparable, customized facilities. Then, to ensure adequate supplies of replacement equipment, Sprint Nextel worked with existing manufacturers to retool their facilities so that they are capable of providing replacement equipment to meet unique needs.

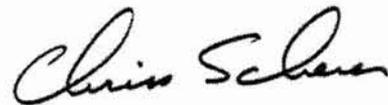
6. Although SBE believes that the BAS relocation will accelerate, it recently became aware of unanticipated Canadian coordination issues that were not anticipated at the outset. When a 2 GHz television pickup (“TVPU”) application specifies an operational area that is within 35 miles of the Canadian border, it appears that Industry Canada is taking the position that moving a TVPU station from, for example, old ENG Channel A3 (2,025-2,042 MHz) to new ENG Channel A3d (2,094.5-2,061.5 MHz), constitutes a “new” frequency use. Such “new” uses are subject not only to Canadian notification but

also to Canadian approval. In the event that Canada concludes that “harmful interference is anticipated” (“HIA”) from the “new” TVPU operations, it may veto the application.

7. SBE believes that these stations should have “grandfather” rights so that, if the current TVPU license authorizes all of the old channels (*i.e.*, 1,990-2,110 MHz), then the new TVPU license should not be treated by Industry Canada as a “new” use for all of the new 2 GHz ENG channels (*i.e.*, 2,025-2,110 MHz). As a corollary, where a TVPU license in the United States authorizes only a subset of the present 2 GHz BAS channels, shifting those specific channels from the old to the new band plan should not be considered a “new” use by Industry Canada if there is already an authorized United States TVPU station on that spectrum. Because of this issue, BAS re-licensing in markets near the Canadian border, or nationwide BAS or LTTS re-licensing, is potentially, and in some cases so far, actually, proven more complicated than initially anticipated.

8. As demonstrated above, Sprint Nextel and SBE have been able to cooperate in addressing unexpected challenges that arose after the commencement of the BAS relocation. SBE is of the view that the speed of this conversion process will now accelerate, following the resolution of inventory and FRA issues.

I, Christopher H. Scherer, declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct to the best of my knowledge and belief.



Christopher H. Scherer, President, SBE

Executed on March 7, 2007