

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

*In the matter of* )  
 )  
**Wireless Telecommunications Bureau** )  
**Seeks Comment on Access 200, LLC** ) WT Docket No. 02-224  
**Request for Waivers to Provide Band** )  
**Management Services Utilizing Licenses** )  
**In the 220-222 MHz Band** )  
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**COMMENTS OF  
Data Comlink, Inc.**

<b>Altamaha EMC</b>	<b>North Georgia EMC</b>
<b>Amicalola EMC</b>	<b>Okefenoke EMC</b>
<b>Carroll EMC</b>	<b>Planters EMC</b>
<b>Central Georgia EMC</b>	<b>Snapping Shoals EMC</b>
<b>Cobb EMC</b>	<b>Tri-State EMC</b>
<b>Excelsior EMC</b>	<b>Upton EMC</b>
<b>Habersham EMC</b>	<b>Walton EMC</b>
<b>Hart EMC</b>	<b>Washington EMC</b>
<b>Jefferson Energy Cooperative</b>	<b>Georgia EMC</b>
<b>Lamar EMC</b>	<b>GRESKO</b>

**I. INTRODUCTION**

Data Comlink, Inc. and its 20 partner electrical cooperatives and allied companies (“DCL”) submits comments in the above captioned proceeding<sup>1</sup> to convey our concerns regarding the effects the proposed waiver requests would have on us and other licensees in the 220-222 MHz band. Furthermore, this action could affect over 800 other electric

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<sup>1</sup> See *Request for Waivers of Access 220, LLC, To Provide Band Management Services Utilizing Licenses in the 220-222 MHz Band*, filed July 3, 2002.

power cooperative utilities across the United States that have an interest in operations on this frequency band.

The electric power cooperative utilities that are partners in Data Comlink, Inc. are chartered under the auspices of the US Department of Agriculture, Rural Utility Service (RUS). Electric power cooperatives serve 35 million consumers in 46 states, and operate in 2,500 of 3,218 counties in the United States. Electric power cooperatives own assets worth approximately \$76 billion, and employ over 60,000 people throughout the country. As cooperatives, we are owned by the consumers we serve. Our board of directors is elected by and from our consumers. DCL's partner cooperatives' primary goal in operating is to provide electricity to our consumer-owners at the lowest possible cost. We utilize two-way radio systems to provide efficient operation of our electric systems, as well as for use during emergency restoration of power.

DCL holds several regional Phase II and location-specific Phase I licenses for 45 channels of spectrum in the State of Georgia, namely WPOI736, WPRX955, WPRX956, WPRX957, WPRX958, WPCW789, WPHR946, WPHR950, and WPHT608. Furthermore, DCL has contracted with the National Rural Telecommunications Cooperative LLC (NRTC LLC) to obtain the rights to NRTC LLC's 22 nationwide and regional Phase II licenses.

**II. WE DO NOT SUPPORT THE APPROVAL OF ANY WAIVER REQUESTS THAT WOULD PERMIT ANY ENTITY TO EFFECTIVELY OPERATE AS A BAND MANAGER FOR THE 220-222 MHz BAND.**

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As a regional Phase II license holder and a contractual user of the NRTC LLC frequencies, we understand the requirements concerning build-out requirements as per sections 90.733, 90.725, and 90.769 of the Commission's rules.<sup>2</sup> However, we do not agree with Access 220, LLC on their request to become a band manager for the 220-222 MHz band, and therefore have the need to apply for a waiver of the Commission's rules on several points. First, as contractual users of the NRTC LLC spectrum, we fully understand the problems and stipulations of nationwide licensees, especially when various kinds of operations or system deployment techniques are implemented.

However, by requesting a waiver of the Commission's rule section 90.733,<sup>3</sup> we would interpret this as a precedent to allow other licensees holding location-specific Phase I, nationwide Phase I, regional Phase II, and national Phase II to use whatever modes of operation or system deployment techniques as they please, regardless of the potential for co-channel, adjacent channel, and other potential interference types. We understand the limitations in which Access 220 will hold themselves, but again, it sets a precedent that we do not want to see. Band managers would be the ones managing the brunt of user- or lessee-related interference problems, with little if any recourse for the user or lessee, whereby the current rules stipulate that the Commission is the regulatory body governing interference issues. Although Access 220 is only one entity, approval of the waivers would pave the way for other entities to become band managers in this band.

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<sup>2</sup> 47 C.F.R. §§ 90.733, 90.725, and 90.769.

<sup>3</sup> 47 C.F.R. § 90.733.

We see the potential for interference as an elementary problem in conception of the role of band managers for the 220-222 MHz band, with no easy solutions when the problems arise. We fear that if the request for waiver is approved by the Commission, through our contractual use of NRTC LLC's channels, we may suffer the consequences of adjacent channel interference from Access 220, LLC's channels with little recourse to fall upon. The addition of other band managers for this already troubled spectrum would make a bad problem worse.

### **III. APPROVAL OF THE WAIVER REQUESTS WITHOUT THOROUGH TECHNICAL AND LEGAL ANALYSIS BY THE COMMISSION IS INADVISABLE.**

We do not want to see sweeping changes made to the 220-222 MHz band without full and thorough investigation of the technical and legal implications of the changes. As an example, the Commission approved several waivers of varying types to a company now known as Nextel. These waivers helped contribute to the incredible number of interference problems plaguing public safety users. As a result, the Commission has had to look into potential solution sets to solve the regulatory mess that has been caused by Nextel, although their method of deployment, emission mask, and operations were fully approved by the Commission. After reading reply comments for this matter,<sup>4</sup> we can only hope that the Commission would realize that granting such waiver requests before fully examining the implications of approval has been a recipe for disappointment and economic disaster. Cost estimates for relieving the interference on the 800 MHz band

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<sup>4</sup> See *Improving Public Safety Communications in the 800 MHz Band and Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, Proposed Rule*, WT Docket No. 02-55, 67 Fed. Reg. 16,351 (Apr. 5, 2002) (NPRM).

range from \$1.5 billion to over \$5 billion. Such cost will become a burden to taxpayers, consumers of nearly all services and products, and the American economy as a whole. Many small businesses will fold, and the landscape of the two-way industry will be forever changed. This cost (or loss) certainly overshadows any cost savings that the Commission would realize by effectively turning over ownership of frequencies to entities that are more interested in commercial interests, and not bound by governmental responsibilities to the public. From all information available, it appears that the Commission has not started any investigation as to the technical and legal implications of such changes as these waiver requests would cause.

Like the Internet Service Provider (ISP) business, we see the movement for band management as a precursor to Land Mobile Radio users having to become subscribers, just like Internet users. The difference is that there is no clear need for this activity, other than for commercial interests of the band manager and a potential cost savings to the Commission. We do not see this move as being beneficial to the common good of the citizenry of the United States, but only to a few fortunate enough to have the financial backing to bid on outrageously priced spectrum that should be nearly free in the first place.

**III. APPROVAL OF THE WAIVER REQUESTS ALLOWING ACCESS 220, LLC TO OPERATE AS A BAND MANAGER WOULD NOT RAISE THE OPERATIONAL EFFICIENCY OF THE 220-222 MHz BAND.**

The Commission set up the 220 MHz band as an answer to the challenge for

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technical efficiency of spectrum use. Although at that time it seemed that certain analog modes of operation using digital processing techniques could be an answer, the resulting regulatory effort and changes in technology have stymied growth and use in the 220-222 MHz band. Only three manufacturers of equipment have successfully demonstrated that their equipment can work at 6.25 KHz channel spacing, and even then, with serious limitations. As a result, one Land Mobile Radio manufacturer has gone out business entirely, another has sold their business to an unknown party to the industry, and the third has experienced only incremental sales of their data radio product. In short, marketing efforts for 220 MHz, 6.25 KHz channel-spaced equipment have failed. Other manufacturers are hesitant to produce or even design products that would work at 6.25 KHz channel spacing for fear of a lack of marketability of such products.

Even more curious, the Commission has stipulated to Land Mobile Radio manufacturers that radios being submitted for Type Acceptance approval must meet smaller and smaller bandwidths, up to and including 6.25 KHz channel spacing. The Commission has ordered that by 2005, all radios designed for Land Mobile Radio use on certain common frequencies and submitted for Type Acceptance approval will have to meet the 6.25 KHz channel spacing requirement. However, few technologies meet this technological hurdle, except digital multiplexed solutions, like Motorola's iDEN - the same product that Nextel utilizes, and has been the root of consternation that is unprecedented in scope for the two-way radio industry.

Waivers as requested by Access 220, LLC would create a vacuum on this band,

making what could be called a bad plan even worse. Access 220, LLC has announced plans to coordinate marketing activities with United States Motorola service shops (USMSS), and in turn, Motorola has suggested that USMSS plan to offer a new line of products from Motorola. The Commission has recognized that "...because of spectrum constraints, part of the solution to the continuing demand for additional PLMR communication services, especially in congested areas, would be the implementation of sophisticated higher-capacity communication systems."<sup>5</sup> These products, as advertised on Access 220, LLC's parent company's website<sup>6</sup>, operate on wider bandwidths that utilize 12.5 KHz channel spacing - not 6.25 KHz channel spacing, as originally planned by the Commission's band plan. This product line only accommodates voice and very limited data capabilities. With the exception of the MPT-1327-compatible products mentioned that are manufactured by Tait, the Motorola products are not a technologically advanced product by any fair assessment of today's marketplace. Comparing the level of spectral efficiency of this product and Access 220, LLC's comments regarding encouragement of efficient use of this band, we differ in their opinion that their operations as band managers for any 220-222 MHz spectrum could enhance efficiencies of spectrum use.

**IV. THE COMMISSION SHOULD REQUEST COMMENTS REGARDING OTHER USES AND BAND PLANS FOR THIS AND NEARBY SPECTRUM BEFORE ALLOWING WAIVERS THAT WOULD AFFECT ANY SUBSEQUENT RULINGS.**

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<sup>5</sup> *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Land Mobile Radio Services*, Report and Order, 6 FCC Rcd 2356 at ¶ 7 (1991) ("200 MHz First Report and Order").

<sup>6</sup> See [http://www.accessspectrum.com/communications\\_solutions/products/](http://www.accessspectrum.com/communications_solutions/products/)

The 220-222 MHz band has had a checkered past. Originally belonging to the Amateur Radio Service, this spectrum exhibits propagation characteristics that are advantageous for various kinds of operations. In our case, 220 MHz allows our utilities to communicate over longer distances than if utilizing 450, 800 or 900 MHz equipment, and with far less congestion and co-channel interference than found on the 30-50 and 150-174 MHz bands. In essence, this band provides rural electric cooperative utilities with an excellent option.

However, as the band is currently planned and regulated, there are some technical problems. Aside from previously discussed matters, two other interference issues exist which pertain to how the frequency allocations are granted. First, the 1 MHz offset between transmit and receive frequencies has been an issue concerning intermodulation interference. When a 220 MHz Land Mobile Radio system is co-located with an 800 MHz Specialized Mobile Radio (SMR) or wireless telephone service provider in the same physical location, intermodulation effects are debilitating. In fact, DCL had to abandon one particular co-location site in downtown Atlanta due to the high level of intermodulation interference. There was a lack of any technical solution for relief, and as a result, the site was turned off and dismantled, causing a substantial monetary loss. Secondly, due to the 1 MHz offset, mobile and portable radio users have experienced receiver desense when in proximity of another user or within one half mile of a repeater site.



Perhaps the Commission should commence a study for refarming the 220 MHz band instead of considering proposals such as presented in Access 220, LLC's request for waiver. We see two possible paths in which the Commission should consider. First, we believe that the FCC should consider auditing existing license holders in the 220-222 MHz band to verify if they either still exist as business entities, or if they continue to use the spectrum. The 220-222 MHz spectrum was not included in the Land Mobile Radio frequency audit held earlier this year. If it had been included in the audit, we feel that a number of licenses would have been returned to the Commission.

The Commission's rules stipulated that, like SMR systems, loading requirements were based on potential numbers of users based on local populations, not actual subscribers using the system as in the past. As a result there are a considerable number of systems that hold spectrum space, and have no subscriber base to substantiate the continued issuance of the license. We feel that the Commission should consider an auditing process before considering such waiver requests for same or adjacent spectrum.

Second, as mentioned in Access 220, LLC's waiver request petition, the Commission has stated that it has "...been hard pressed to accommodate the demand for private land mobile radio (PLMR) communications services within existing allocations."<sup>7</sup> The Commission has been planning a new auction to issue licenses in the 217-220 MHz band, also known as the "White Areas" of the Automated Marine Telecommunication

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<sup>7</sup> *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Land Mobile Radio Services*, Report and Order, 6 FCC Rcd 2356 at ¶ 6 (1991) ("*200 MHz First Report and Order*").

System (AMTS). These licenses, which cover 40 channels, would only be issued in areas away from inland waterways where successful commercial operations were originally conducted and are ongoing. In this spectrum, 12.5 KHz channel-spaced radios using FM for voice communications and limited data capability are being used under Part 80 of the Commission's rules. We believe that this spectrum, for areas specifically designated as the "White Areas" and protective of the inland waterway systems, should be regulated under Part 90. In addition, the channel assignments should be kept at 12.5 KHz channel spacing in order to fulfill the needs of today's radio users, and to provide a new, multi-vendor commercial outlet for a variety of manufacturers who are now selling radios competitively under Part 80 rules. In most cases, such products should pass Part 90 Type Acceptance testing with little if any modification.

Further, the spectrum at 222-225 MHz that is currently held by the Amateur Radio Service is being underutilized. In the early days of 220 MHz commercial regulations, Amateur Radio Service licensees argued that their spectrum was necessary and important in order to provide communications in the event of disaster or emergency. Although we take no issue with this claim, we do not feel that the 222-225 MHz band has been utilized as well as Amateur Radio licensees have claimed it would be by so-called "no-code hams" in their efforts to keep a foothold in the 220 MHz arena. In nearly all but densely populated areas, the 222-225 MHz band is largely quiet. Only handfuls of individuals in the Amateur Radio Service even use this spectrum, while hundreds of thousands of potential commercial users wait with no alternatives. With the considerable commercial interest that Access 220, LLC has placed on the 220-222 MHz band by

asking for its waivers, we feel that the spectrum held by the Amateur Radio Service would be much better utilized for commercial use. Existing 222-225 MHz radio system users are so few that the economic impact to those affected will be very minimal.

Therefore, if the 217-220 MHz and the 222-225 MHz frequency bands were made available by the Commission for commercial use through modifications in Part 90 of the Commission's rules, up to 120 channels utilizing 12.5 KHz channel spacing could be created. In the cases where geographical proximity to the U.S. Navy's SPASUR space surveillance systems would prevent use of certain 217 MHz channels, the corresponding 222 MHz channels could be used for simplex operation.

Likewise, the 5 MHz separation between transmit and receive channels could alleviate the intermodulation and receiver desense problems found on 220-222 MHz systems. This separation method has been used successfully for many years on the 450-512 MHz spectrum as regulated under Part 90 of the Commission's rules. Users of the 220-222 MHz spectrum would not be affected, and new users to the 217-220 MHz and 222-225 MHz would not experience interference from existing users at 220-222 MHz.

Existing and new licensees of the narrow 6.25 KHz channels at 220-222 MHz should be allowed to implement systems that, like the Commission planned, utilize ultra narrow bandwidths to adhere to 6.25 KHz channel spacing. This would include data operations for mobile vehicle location, fixed data for Supervisory Control and Data Acquisition (SCADA), status and messaging, and other operations that can utilize a 3,200

baud rate or less for successful throughput. By allowing and encouraging such use, the Commission would alleviate a considerable need by many groups, including the roughly 900 rural electric power cooperative utilities that serve about 80% of the geographical United States. It would also alleviate the need for rule waivers of the types requested by Access 220, LLC.

Once a band plan is formally created and approved by the Commission, we believe that band managers, held to strict regulation as to what kinds of system operations and what kind of deployment techniques are permissible, might have an important role in frequency coordination and mediation between users for spectrum holdings they may ultimately receive. However, we have a clear preference to permit licensees to hold their own licenses, and not to auction off a block of spectrum to one business entity for narrow commercial interests. This preserves the interest of the public at large, and also preserves the right of the Commission to effectively regulate wireless spectrum. We do not feel that the introduction of band managers in existing and useful spectrum, unlike 700 MHz, is warranted. In the case of 700 MHz, band managers were created to split up this new and virgin spectrum in the most expeditious way that generated the most amount of revenue to the Commission at the lowest cost of issuance. The 220 MHz spectrum is different by nature of its existing regulations and by physics, and thus should not be conglomerated within the auspices of the regulations set forth for 700 MHz and its band managers.

## **VI. CONCLUSION**

DCL feels that the petition before the Commission for waiver of rule sections 90.733, 90.725, and 90.769 by Access 220, LLC would not be in the best interests of current or future licensees of this spectrum, nor to the good of the general public for which we serve. As core participants of what has been deemed 'critical infrastructure' by the Association of Public Safety Communication Officers (APCO) in a post-9/11 America, we feel that our interests in the 220 MHz spectrum are considerable and necessary for the public good. We believe that the Commission should thoughtfully consider any changes to existing 220 MHz spectrum and how it might affect current and new licensees in the future before implementing such changes. We believe that by creating a role for band managers on the 220 MHz band, the Commission will be embarking on a path that will be nearly impossible to change in the foreseeable future. These changes will affect current licensees, and mold the shape of how the 220-222 MHz band will be utilized without any significant technical or legal review. Lastly, we believe that there are other ways to reform the existing spectrum and to reallocate little or non-used spectrum above and below this band in order to maximize opportunities of all entities interested in this frequency band. This can be done in a technically feasible way and with little if any impact on adjacent frequency users.

We urge the Commission to examine other solutions to 'fix' the 220 MHz band, since as it stands, it could be considered 'broken'. By allowing a waiver to the Commission's rules and permitting band management on the 220 MHz band, we do not think that such a decision would assist anyone other than those who stand to directly benefit from specific and narrow commercial activities.

Respectfully submitted,

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