

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of the Commission's Rules Concerning Maritime Communications)	PR Docket No. 92-257
)	
Petition for Rule Making filed by RegioNet Wireless License, LLC)	RM-9664
)	

To: Chief, Wireless Telecommunications Bureau

**Reply Comments
of Warren C. Havens Regarding the
Third Further Notice of Proposed Rule Making**

Warren C. Havens ("Havens") hereby submits the following reply comments regarding the Third Further Notice of Proposed Rule Making (the "3rd FNPRM").

AMTS Auction Should be Suspended
in Favor of New Viable Plan for 216-225 MHz

220 MHz, AMTS, and IVDS have not succeeded. Why pursue more of the same failure via a near-term auction of AMTS that is likely to just reward incumbents that have, at best, achieved precious little to date?¹ It is wasteful and dumb to do so when both the past and ongoing failure as well as a solution are apparent.

¹ Rather, beyond achieving little, with evidence and legal arguments, I have presented a strong case against the largest incumbent, Mobex (which owns Regionet and Watercom) for engaging in a long history of abuse of FCC rules, stike applications, and deception under oath before the FCC. The FCC, in its recent decision dismissing a number of Regionet applications, found that Regionet's factual claims as to not interfering with TV households were simply not credible. In fact, they were bald misrepresentation. These and far more serious, repetitive cases of abuse of process are documents in dozens of filings I have made before the FCC petitioning against AMTS applications by Mobex (including its Regionet subsidiary).

In our technological fast-moving civilization the government and the "market" must be balanced: *there is a great need for creative bold intelligent regulators in these times to match the market*; otherwise, a segment of the market (parties with most influence or foothold in a circumstance) will take advantage, lead the regulators around by the nose, and society at large will suffer.

The FCC should look more toward the "forest" of longer-term better plans for various wireless services and less at harvesting another "tree," another auction-as-usual. For reasons given in my Comments, AMTS will fail (verses its potential) if auctioned as planned. In my Comments, I described a broader, more sustainable "forest" plan for 216-225 MHz as part of a multi-band National Infrastructure Radio Service ("NIRS"). In the Exhibit below, I attach Comments I submitted this week with respect to the FCC Reallocation proposal that includes 216-222 MHz. This further describes the 216-225 MHz band component of the proposed multi-band NIRS (such component called "Advanced 220 MHz" in the Exhibit): If the FCC does not take action in the direction of NIRS, then I propose that, at minimum, it postpone any near-term auction of AMTS and seriously consider the AT 220 MHz plan (or something along those lines) as a stand-alone one-band plan.

There is little actual public service in AMTS (especially marine service): mostly, there was the failed Watercom attempt (with never remotely close to a need for what it represented it needed to obtain both the A and B block), and otherwise, mostly spectrum

warehousing using bogus (not real life) 17 dBu service contours² (see below): Incumbents have no right to an auction similar to past ones, nor one in the near future. If Mobex's systems are not viable as it proposed them to the FCC (with unrealistic 17 dBu contours, to save costs as Mobex stated in its Comments), that is their problem, not the problem of the FCC to fix via an auction (and/or via excessively liberal "Fill-in" station rules based on 17 dBu's) to their benefit. The incumbents in AMTS have had vast amounts of spectrum in most major US markets for years but haven't found much need. They can't now claim that, simply due to an auction resulting in geographic licenses, a major need will pop up. However, there is need for advanced services as proposed in my proposals for NIRS and AT 220 MHz Services (respectively made in my Comments, and in the Exhibit below). But for such advanced services, there must be a good long-term plan and a quantity of spectrum on the order I propose.

In sum, (i) there is no need for an auction of AMTS in the near future per the 3rd FNPRM, (ii) there is a strong need for a good long-term broader plan for 216-226 MHz, and (iii) auction of AMTS per the 3rd FNPRM would be a great waste of a valuable public resource.

It is common knowledge among major licensees in AMTS and 220 MHz (I am one of them and know the others) that these two bands should be consolidated at some point reasonably soon, that such parties plan to jockey to lead such consolidation, and that such consolidation should involve ultimately all of 216-225 in one service. *It is far better for the FCC to take a pro-active role in this*, and not be misled by incumbents proposing auction

² Herein, unless explicitly stated otherwise, when commenting on incumbents, I refer mostly to the largest incumbents as aggregated by Mobex: Regionet and its predecessor Orion, as well as

rules and procedures to their benefit as if they believe AMTS is going to grow up and become a viable service in itself (if it was, it would already be "alive and jumping") only to already be planning, thereafter, to ask for other relief and rules to end up, piece by piece, with a 216-225 MHz (or thereabouts) service.

So-Called MX Applications:
Actually Impermissible, Defective "Strike" Application

Mobex comments that the FCC should return or dismiss mutually exclusive ("MX") applications. This is not the real story. Mobex did not file legitimate MX competing applications but "strike" applications, with gross substantive defects, and in some cases even containing copies of engineering from my applications produced with proprietary software by Ralph Haller of Fox Ridge Communications.³ As documented in numerous petitions to deny over one hundred AMTS station applications of Mobex filed after seeing my applications for the same inland waterways, Mobex filed "strike" application (filed with intent to block a competitor, etc.), that are also clearly defective in substance including under Sections 80.475 and 80.215.

Mobex has, in writing, explicitly and implicitly,⁴ stated why they filed these: to block my applications so that the FCC would dismiss my applications prior to an auction (which it hopes to dominate, saying so publicly, keeping competition out of AMTS as

Watercom (both Regionet and Watercom are currently fully owned by Mobex).

³ Such copies resulted in large inaccuracies in the Mobex applications since the work copied was specific to the sites in my application, which were different than the sites in the Mobex applications hastily submitted in an attempt to MX my applications and get them dismissed prior to auction.

much as possible). Month after month, after seeing my series of sound applications for inland waterways that, for years, Mobex did not have interest or capability to apply for,⁵ Mobex filed its so-called MX applications (as if it had sincere intent to serve the subject waterways, and as if its applications were sound)⁶ with the expectation and hope that the FCC would find-- as it now pleads in its Comments-- that its applications and mine "are determined to be in a state of mutually [sic] exclusivity," and thus trash them all. I did not once apply to MX Mobex (or anyone) and applied only after I properly researched and prepared applications meeting all FCC rules and containing all required showings. Mobex, however, submitted applications knowing that, at best, it would only block my applications and get them dismissed.

I intend to pursue whatever administrative or judicial review is necessary, for relief and sanctions, as this is not only against my fair business interests but constitutes a major, well-focused case of abuse of governmental process (and is anti-competitive, unfair

⁴ The explicit and implicit statements are cited in my pending petitions to deny noted in the text above, and in my Reply to Mobex's Opposition to my Petition for Reconsideration of the FCC dismissal of my application to serve the Arkansas Headwaters River.

⁵ It (Regionet) could not even construct what to speak of load the huge amounts of AMTS it had obtained via misrepresentations noted below, that 17 dBu contours (and given the placement of its stations, few placed to cover well the subject bodies of water) in reality provided the continuity of service required under Section 80.475 (a).

⁶ Mobex (that is, Regionet and its predecessor, Orion) for years filed applications that contained an "engineering study clearly showing" interference avoidance with TV stations required under section 80.475 (a) (1), however, it did not provide such study with these so-called MX (actually "strike") applications. This is but one give-away that the applications are stike applications, and are defective. Mobex knew what had to be supplied and did not do it: it didn't have time, and believed that if it MX'ed my applicaitons, they will be tossed out by the FCC, and then Mobex can bid for the subject spectrum at auction. That is impermissible strike intent and abuse of process.

business, and breaches the code of ethics of the bar) and is thus appropriate for a legal precedent.

It is my understanding that the Wireless Bureau has decided to process the above-noted petitions to deny that I filed in which I provide the facts and arguments with respect to Mobex's so-called MX applications actually being "strike" applications with gross defects⁷ constituting abuse of process, that must therefore be dismissed.

Contrary to this Bureau decision to process and its attendant risks to Mobex (that some or all of its applications are dismissed, some of mine granted, and potential sanctions), Mobex clearly wants its goals of the so-called MX applications achieved-- dismissal of its own pending applications along with mine-- without the FCC peaking under the covers of the applications' facial acceptability (their being accepted for filing). That is the goal of its Comments on this so-called MX status matter: By now, Mobex sees the risks: (i) it understands that the Bureau is going to process the petitions to deny, (ii) in doing so, the FCC may find the applications defective with respect to impermissible intent and abuse of process, and/or substantive defects as the FCC found in a recent batch of Mobex applications that had some of the same features and defects as the so-called MX applications (see preceding footnote regarding the January 31, 2001 Order), and (iii) the FCC may then find many of my applications that had been MX'ed as grantable.⁸

⁷ In a recent Order dated January 31, 2001, the FCC dismissed a number of Mobex (Regionet) applications that were not MX with my applications, finding that the factual assertions by Regionet were not believable as to protection of TV stations, that Regionet was so clearly wrong by orders of magnitude that even a layman could not believe such assertions. These defects, and many others, are contained in the so-called MX applications.

⁸ The FCC granted all my applications processed to date except those where it did not accept my assertions that I provided sufficient coverage under rule 80.475 (a). I submitted two petitions for reconsideration on these matters which are now pending. The majority of my applications not yet

Accordingly, Mobex's comment on dismissing all so-called MX applications is its self-serving attempt to divert the FCC from its proper decision to process the petitions to deny. Such diversion is contrary to the public interest for the reasons noted above and the reasons of the Bureau in deciding to process such petitions.

The rest of my reply comments, below
are made, principally, in the event the FCC does not accept
the proposal made in my Comments, noted again above,
to suspend any near-term auction
in favor of new viable plan for 216-225 MHz such as I outlined.

Service Contours and
Related Interference Protection

In all my applications, including those granted, I used realistic contours (virtually the same as proposed by the FCC). Other applicants and incumbent licensees could and should also have done so. They have to now accept the consequences. Those consequences are discussed below.

In its Comments, Mobex⁹ (and Paging Systems, Inc. ["PSI"]) inform the FCC that there is an "established service area definition" or "rule" (underlining added) of 17 dBu. *But there is no such thing*, and resorting to fiction only reveals a bogus position, which is indeed the case here regarding 17 dBu as a service area standard, and a basis for related co-channel protection standard.

ruled upon which Mobex MX'ed do not have the issues which gave rise to the FCC's dimssing the ones just noted, but have the same characteristics as those that have been granted.

⁹ Herein, by "Mobex," I mean to include Regionet and Watercom, which Mobex owns.

Mobex continues to say that "had the Commission based the service area of an AMTS station on a higher signal level, then the incumbents would have needed more coast stations to provide the required continuity of service," which would result in "excessive costs." (Pp. 8-9)¹⁰ PSI mirrors Mobex on this matter (p.6). Mobex continues to admonish the FCC that, "[i]f the Commission adopts its proposal for a 38 dBu service area contour, it should have to demonstrate changed circumstances to justify the change in the rule. . . . in the long established service area signal level definition." (underlining added) (Mobex at p. 9.)¹¹ PSI mirrors the same (p. 6). These incumbents suggest that the FCC "established" 17 dBu as a "definition" or "rule" for service areas (and a basis for co-channel interference protection)--but the FCC never did either.

Rather, the FCC did have a service coverage rule, Section 80.475 (a) which requires that Applicants show how the proposed system will provide continuity of coverage to the subject waterway or coastline. To obtain license grants at low cost (less application engineering, and far less cost to build and operate and maintain the spectrum),^{12 13} Mobex

¹⁰ This makes no public interest argument: if the FCC required a smaller contour (higher signal strength) it would not be to make it harder and more costly for operators, but to achieve real service to the public. If that costs more, too bad. This comment of Mobex only suggests a spectrum warehousing mentality.

¹¹ Mobex and AMTA (speaking for its dues-paying member Mobex) all suggest that if the 17 dBu "rule" or "definition" they say exists is not "maintained," then their alleged service to the "maritime public" would be hurt. I dispute that and assert that their problem is (i) they want to serve land mobile and do not substantially serve or care to serve the "maritime public" (especially Regionet on the East and West Coasts and Great Lakes), and (ii) 17 dBu's were only good at cheap spectrum warehousing (blocking competitors from applying) and not for real-life service. (iii) But they need the FCC to "maintain" the 17 dBu's they, not the FCC, chose, so they can "fill-in" with stations to achieve real-life coverage for land mobile and so they can keep out auction-winning licensees from placing stations in the vast areas between their absurdly far-spaced 17 dBu-based stations.

¹² As stated in my Comments, as well as in my Petition for Reconsideration of the Fourth Report and Order (with respect to "Fill-in Stations," etc.), and in numerous Petitions to Deny "strike"

chose 17 dBu, representing to the FCC in their applications that these realistically met that rule. (This rule could not mean imaginary unrealistic "continuity of coverage.")¹⁴ *If, in its applications for years, they were mistaken in or they misrepresented the efficacy of 17 dBu's to fulfill this essential continuity-of-coverage requirement of Section 80.475 (a), and the FCC relied on such representations and granted such applications, then they can't now blame the FCC for proposing a realistic service contour (and its ramifications regarding interference protection and "Fill-in Stations). Rather, they are to blame for such mistakes and/or misrepresentation. It is the FCC that has a case against Mobex for "reliance" damages and "relief," not vice versa, as Mobex and its near-proxy AMTA suggest.*

In fact, with 17 dBu's, they never had continuity of service for land mobile or for serving inland waterways (nor for coastal or Great Lakes marine traffic unless stations were placed close to the shores).¹⁵ If the FCC adopts a service contour significantly less (higher

and defective applications of Mobex (including its Regionet subsidiary), with evidence, I do not believe many of such entity's AMTS licenses were timely constructed or maintained under FCC rules, nor that at most of its AMTS stations the FCC requirements with regard to provision of service to maritime (vs. land mobile) service was fulfilled.

¹³ In its Comments, Mobex states that 17 dBu's result in fewer stations and less cost. PSI states the same.

¹⁴ In AMTS, unlike land mobile, real-life continuity of coverage service along a very specific path or ribbon, the subject waterway, is required (especially for a river). In land mobile, coverage from a site will at least cover a good bit of the targeted land area, even if not realistic to cover some targeted more-distant and more-difficult terrain areas: such coverage will at least provide a good measure of service. However, in AMTS, without use of realistic service contours over the waterway, there will be no continuity of service and the purpose of AMTS will be defeated (only good for warehousing followed by specious "fill-in" stations actually needed to turn bogus-engineered systems into real ones). For inland AMTS, a 17 dBu is far insufficient, especially in river valleys and forested areas where inland rivers lie. Regionet (owned by Mobex) admitted this in its Opposition to the Petition to Deny of Warren C. Havens of the Regionet applications to serve the Owens River.

¹⁵ 17 dBu may be realistic for service to good-sized ships with installed high-power mobiles and good antennas and given the low-noise environment over the water, and assuming the series of base stations was located near the water and not well inland. But a large percentage of Mobex

signal strength, lesser contour) than 17dBu, then it should consider rescinding licenses granted via misrepresentations that 17 dBu contours met the continuity-of-coverage requirements of Section 80.475 (a). At minimum, it should adopt a realistic contour as it proposed, and a related reasonable co-channel interference protection standard as it proposed, and allow "fill-in stations" only based on such realistic contours (see my Petition for Reconsideration of the Fourth Report and Order, attached in pertinent part to my Comments).

Regarding the maps attached to the Mobex comments (Exhibit II, in two pages): First, the first page depicts stations formerly owned by Watercom, now allegedly maintained by Mobex's Regionet division. It is significant that Mobex chose this section of sites that Watercom had (i) placed close to the coast, and (ii) spaced such that the 17 dBu contours overlapped well along the subject coastal waterways (assuming here its map accurately depicts such locations and contours, which may not be the case)¹⁶: that is,

stations are not so located, and Mobex is not materially serving maritime traffic but attempting or intending to serve land mobile. Also, maritime traffic is not what the FCC expects most AMTS after any auction to be primarily used for, rather, it will be used primarily for land mobile, where a service contour (and related interference protection standard) as the FCC proposed is required to for realistic coverage.

Furthermore, virtually all radio services *are increasingly shrinking their service contours*, deliberately restricting the maximum servicable radius (or contour) of service, in order to gain more capacity by increased frequency reuse and to allow for smaller lighter handhelds. If AMTS is to succeed, it must succeed in land mobile, and for this success, it must move toward such smaller cells and smaller handportables. 17 dBu's are excessive even for installed higher-power mobile use in land mobile service, but considering this required direction of AMTS, its excess is even more pronounced.

¹⁶ Mobex, in many of its applications, has submitted faulty or false engineering and factual assertions. See above reference to the FCC's January 31, 2001 Order, and various petitions to deny I filed against Mobex noted above. See also the FCC January 31, 2001 Order dismissing the Watercom petition to deny some applications of mine in Texas in which the FCC indicates what I pointed out in my Opposition to that petition: Watercom (then under the control of Mobex) misrepresented my proposed stations (it even produced maps falsely depicting what I actually

Watercom may have attempted 17 dBu-contour engineering to serve the subject waterway. However, had Mobex used a map of its Atlantic, Pacific, or Great Lakes licensed territory, what would have been revealed are (i) many sites placed absurdly far inland, and (ii) sites' 17 dBu contours that often barely touched the subject coastline, and with meager overlaps of each other, that is, systems that were obviously not designed even for 17 dBu coverage.

But even using this *far-and-away* best-case Mobex can present, its second map shows more realistic coverage for what it really wants, the cities and highways along the coast, such as Houston-Galveston, New Orleans- Baton Rouge, Interstate 10, etc. That is, such contours are the far-end (the largest contours, the weakest signal) of what is realistic. In this regard, virtually all significant commercial mobile radio services *are, and for a decade or so have been, increasingly shrinking their service contours*, deliberately restricting the maximum serviceable radii (or contours) of service, in order to gain more capacity by increased frequency reuse and to allow for smaller lighter handhelds. If AMTS is to succeed, it must succeed in land mobile, and for this, it must move toward such smaller cells and smaller handportables. 17 dBu's are excessive even for installed higher-power mobile use in land mobile service, but considering this required direction of AMTS, its excess is far more pronounced.

Further on this point, Mobex claims that AMTS needs more capacity to succeed (I agree: see first section above) and thus it seeks to obtain both A and B blocks in an auction, and so forth. If that belief was not short-circuited by its primary interest in

proposed, in order to attempt to demonstrate interference. Mobex has also a number of times tampered with direct quotations from my filings before the FCC, lifting parts of what I wrote and combining such parts to twist what I wrote and submitting such to the FCC. I pointed these out in my responsive filings.

inexpensive warehousing of spectrum and keeping competitors out by hook or crook,¹⁷ then it would never have applied with and maintained 17 dBu contours, but instead would have used realistic much-smaller contours resulting in more closely spaced stations and thus more far more frequency reuse and capacity.

In addition, Mobex further contradicts its call for 17 dBu's by its suggestion on page 14 that it wants "to compete effectively against other CMRS services . . . [and for this, to use certain mysterious] state of the art, maximally spectrum efficient technology."¹⁸ Despite the amusing Wizard-of-Oz hyperbole, what is clear is that all new advanced successful CMRS is based on portable low-power voice and/or data radios, which require stations placed to accommodate them, which use of 17 dBu's will never permit.

Finally, if the FCC does not, as I propose, put off any near-term auction in favor of a more creative, broader, longer-term plan for 216-225 MHz, *then at least it should adopt in the near future* the realistic service contours (or as expressed in the Fourth Report and Order with regard to "Fill-in Stations," interference contours" [that are based on realistic service contours]) for purposes of real "Fill-in Stations" (see Attachment to

¹⁷ Substantiated in detail in my pending petitions to deny and call for sanctions noted above.

¹⁸ In this section, Mobex also contradicts itself by first saying that "AMTS operators use three different technical systems," and later saying, "Mobex desires to use [one of these three] . . . but cannot obtain such . . ." It it can't obtain it, it isn't in use. In any case, if it wants the FCC to believe such assertions, it has to give specifics, not play the Wizard of Oz behind a curtain. No vendors are secretly dealing with just Mobex regarding provision or potential provision of equipment for AMTS. Vendors always seek out all potential buyers, and there are only a few of us in AMTS. Also, see my Comments: I have directly and indirectly interest in a large portion of 220-222 MHz consisting mostly of adjacent channels on which can be used the same equipment as can be used in AMTS. I know all the vendors that provide or may provide equipment to AMTS. The problems with vendor interest that Mobex points to can only be solved by a scheme

my Comments: pertinent part of my Petition for Reconsideration on the "Fill-in Station" rule adopted by the Fourth Report and Order).

Bidding Credit (and Debit) Matters

Mobex should not, as it requests, be granted special favors in term of obtaining bidding credits it does not qualify for under established rules (and AMTS warrants no special rules). Whether revenues are from "activities that have been discontinued for more than a year" or proceeds of a sale of such business, or from Santa Claus-- doesn't matter. If such revenues became in the possession of the auction applicant in the time frame involved under the rules, then they have to be counted. If Mobex wants to donate such revenues to charity, then let it come back and ask for special dispensation.

The FCC should impose bidding debits on licensee warehouseers and abusers: if, pursuant to an investigation of incumbents as suggested in my Comments and further herein, or otherwise, the FCC finds abuse, then one sanction should be (in addition to others such as rescission of licenses and fines, and if the FCC does not bar such abusers from holding any FCC licenses) a bidding debit of 35% above the no-credit, no-discount price.

License Areas

There is no public-interest basis for the recommendations of Mobex, and Mobex articulates none. First, I am a VPC licensee, holding the second-largest amount of VPC (territory and "Pops") to Maritel. Mobex is wrong that the large non-inland VPC license

as I proposed in my Comments and supplement by the Exhibit below, not by perpetuating incumbent systems in AMTS with bogus contours and histories.

areas were "appropriate." Based on what Maritel has represented to the FCC (e.g., in its failed petition after the VPC auction to deny my and all licenses won at auction, even its own, and to hold the auction over again), it went into the auction to expand its maritime service, not to foray into land mobile. It did not want to bid for huge land areas-- most of the United States, just to get the coastal areas. It would have bid more per territory (and been a more enthused and viable post-bidder business) if it could have bid for what it wanted most, and same for myself: I did want to bid for all land and waterway areas in such huge licenses, but I did want some. And other parties I know in land mobile steered away from this auction due to such bizarre license areas.

What the FCC should consider is two things: (i) what license areas will bring to the auction the most qualified bidders, regardless of price they bid, and (ii) what will bring most competition on price (these two things do not always run in parallel, and the former is the primary purpose of auctions). In this regard, what I proposed in my Comments: REAG's (as used for some 220 MHz licenses), makes most sense. The last thing that would make sense is to design geographic licenses around incumbent warehoused licenses and warehouse interests. Those incumbents should have to compete for licenses designed not for them but for what AMTS is obviously going to be mainly used for, as Mobex itself admits, if AMTS to succeed at all: advanced CMRS based on the major market of land mobile, not the niche market of coastal marine traffic.

Nationwide is too large in that it would reduce too much competition; EA's are too small, creating too much effort to piece together substantial territory and inviting speculators to buy such bite-size areas and sit on them hoping for a consolidator to acquire them at a profit. REAG's are large enough to attract bidders with more serious

capabilities, plans and financing, but also small enough (given the small amount of spectrum involved) for even a modest-size company to place reasonable bids, if serious.

"Only- Suitable Location" and Related Matters

Under Section 80.215, in the context of the underlying TV protection goal by this Section (and part of 80.475 as well), and if English language is not to be turned on its head, "only suitable location," cannot mean "especially suitable": the former means one tried diligently (and demonstrably) to find another location to more assure the protection goal, but could not find one (assuming one went to at least close to the limits of commercial reasonableness); the latter means one did the opposite: looked for a site that was just dandy for the AMTS purpose without regard to this protection goal.

In the Corona Order and elsewhere, the FCC gave a different, logical interpretation: "only" meant "only": a strict standard. In any case, until the rule is changed, it cannot as written reasonably be "interpreted" (by the Wireless Bureau or any applicant) other than what its plain English and context means, as noted above. If the FCC has for some time intended to change this rule (there is no meaning to "clarifying" a rule via an interpretation contrary to its plain meaning and context), I strongly protest that it did not "just do it," as not doing so cost me on the order of "six figures" in additional expense in my applications, resulted in loss of time in applying, and most seriously--subjected my applications to the campaign of "strike" applications by Mobex described herein. Indeed, in numerous consultations with the Wireless Bureau as to all applicable rules regarding AMTS applications, including rules relating to protection of TV stations, this "interpretation" was

never provided to me and my consultants who prepared my applications, Ralph Haller and Gary Stanford of Fox Ridge Communications.

Mobex proposed that this "only suitable location" rule (which it mischaracterizes as a requirement to "state that . . . [the subject] location is the only suitable location"¹⁹ be eliminated, as it has resulted in some "litigation" it did not describe (apparently, disputes with TV stations). Such disputes could have been mostly avoided had Mobex (Orion and Regionet) done what the rule calls for-- diligently looked for sites that did not have contours overlapping many TV households and otherwise worked reasonably with TV stations. In the process of submitting over one hundred AMTS applications, supplying full copies of my engineering to all TV stations required by the rules, in only two cases did any TV station raise concerns, and in both of these cases, my consultant and application preparer, Ralph Haller of Fox Ridge Communications, satisfied the concerns (with no application modification). Mobex could have done likewise if they were not so careless and aggressive. The litigation they complain of is their own doing.

As I suggested in my Comments, TV protection should not be abandoned. It will only lead to much disputes and delays in sustainable AMTS service. If past rules relating to TV protection are not adequate (they at least need one clear standard, not the Eckert Report or "whatever else"), then the FCC should, based on sound engineering studies, take a look at the whole TV protection scheme and decide on appropriate minor or wholesale

¹⁹ Remarkably, in scores of applications, Mobex merely stated that the subject site is the only suitable location since it provides coverage to the subject body of water-- a requirement of all proposed AMTS stations. That is less than a bald assertion of "only suitable location" in that reasons are given clearly given fail. (At least a bald assertion with no reason leaves room for an unstated potentially sound premise.) (For its purpose of MX applications that it believed (see text above) would result in dismissal of both its and my applications, however, such nonsensical statements can be understood: no need to make sense on a suicide mission.)

revisions. It should not engage in piecemeal "clarifications" here and there, especially if they are not actually clarifications but substantive changes. It risks real lose of credibility by doing otherwise.

In any case, it should not retroactively apply "clarifications" that are actually changes to a standing rule that on its face and per its context (and at least per some past Orders) cannot credibly be so "clarified."

Band Managers

Mobex states no coherent objection to a Band Manager scheme for AMTS. Consistent with my Comments, the idea of Band Managers has merit, at least in context of a viable 200-MHz range service as I proposed in my Comments ("NIRS") and augment in the Exhibit below ("AT 220 MHz" component of NIRS or stand-alone service). Any new scheme is likely to take time and iterations to succeed well, but it represents the type of bold creative thinking needed by regulators (see my opening remarks above). Further, it represents a possible means to sort out the highest and best uses, by allowing multiple parties to try out various uses, markets, technologies, etc. Mobex's underlying objections may rest on (a sound) estimation that it will be harder to "flip" (quickly obtain and sell off) AMTS auctioned licenses (coupled with its incumbent licenses that it may retain) for a good profit if such licenses involve a Band Manager scheme, restrictions, and obligations. However, that would not be a sound public-interest argument, but the opposite.

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Respectfully submitted,

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March 8, 2001

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
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Reallocation of the 216-220 MHz,)	ET Docket No. 00-221
1390-1395 MHz, 1427-1429 MHz,)	RM-9267
1429-1432 MHz, 1432-1435 MHz,)	RM-9692
1670-1675 MHz, and 2385-2390 MHz)	RM-9797
Government Transfer Bands)	RM-9854

To: Chief, Wireless Telecommunications Bureau

**Comments on
of Warren C. Havens on the
Notice of Proposed Rule Making**

Warren C. Havens hereby submits comments on this Notice of Proposed Rule Making (the "NPRM"). I currently hold AMTS authorizations (in the 216-220 MHz range) to serve five inland navigable waterways and have pending applications to provide AMTS services to numerous other waterways. I also hold licenses in the 220-222 MHz service (and several other radio services not relevant to this NPRM), and have a majority interest (on a fully diluted basis) in Net Radio Communications which holds 220-222 MHz licenses ("220 MHz"). I am transferring these licenses to a company I will operate to provide varieties of commercial service and through which I will participate in future FCC spectrum auctions such as those involving the above-referenced bands.

Summary

Today, Information Technology is leading the world economy and wireless is a leading component in IT, often projected to soon have more traffic than wired networks.
²⁰ Change is occurring rapidly and in wireless, and a new technology good enough for any nationwide deployment involves billions of dollars in development and construction and years of work.

For this, there must first exist the underlying spectrum available of sufficient quantity and nature, along with suitable regulatory framework. "Advanced Technology 220 MHz" ("AT 220 MHz") as outlined below would contribute to this.

Also, public-resource-licensed commercial business (including FCC wireless licensees) should be held to higher "corporate citizen" standards than other private enterprise. In this regard, I propose below a "Nationwide Environmental Wireless Service" as a component of AT 220 MHz.

Finally, spectrum reallocation should be combined with FCC (and other Federal) support for US advanced wireless technology, "4G technology." One way to achieve this is noted below: support of the DARPA 4G initiative now underway.

²⁰ Even is close to correct, there will be a need for many times the spectrum that exists in total that is usable for wide-area systems (several GHz down to 100 Mhz or thereabouts). The need for more spectrum for more and more advanced wireless is a major concern these days from commercial wireless operators and vendors, the FCC, Congress, the Executive Branch, and the Military (which wants to keep what it has in the face of demands to release spectrum to the burgeoning commercial wireless industry).

216-225 MHz:
Proposed "Advanced Technology 220 MHz Service"
("AT 220 MHz")

220 MHz, IVDS, and AMTS are lightly used and have been form their long histories. There is insufficient spectrum in each to support viable technology, operations, and services in the face of the increasingly successful major commercial wireless bands and the technologies made for them. Also, Amateurs lightly use 222-225 MHz bands and have sufficient other spectrum to use.

216-225 MHz should be allocated for operations under one set of rules for an advanced technology service in this range (herein, "AT 220 MHz").

The proposed auctions in AMTS and IVDS should be postponed pending an appropriate rulemaking in AT 220 MHz which would conclude in an auction of spectrum in this 216-225 MHz range.

Under AT220 MHz rules, I propose, incumbent (pre- AT 220 MHz- auction) Licensees in these bands could elect to operate under the AT 220 MHz rules until a certain date, after which they would be required to conform.

Technology that should be considered for the unpaired block of spectrum proposed for AT 220 MHz would include: SDMA+TDD (such as from Arraycom as noted in the NPRM); IP packet data technology (IP packet data air interface and IP core network also) combining voice and data; and other advanced techniques. (See also below under the DARPA 4G comments.)

National Environmental Wireless Service ("NEWS"). One use of AT 220 MHz should be for nationwide intensive wireless environmental (including wildlife) monitoring. This frequency range is very suitable for the wide-area "macrocell" coverage needed and coverage of rural and wilderness areas with rugged terrain. *There is no more important US resource than our environment. It is in a besieged state and need monitoring if it is to be "protected." Nationwide advanced wireless monitoring is needed for this.* It is a travesty for both public and private sectors to continue to overspend our environmental resources and drag our feet in even knowing the real effects.

The government, private, and non-profit sectors should cooperate in a NEWS to collect real-time and near real-time data on all ecosystems, and component localities, and provide the data in raw form and in various formats to research and "watchdog" entities and the general public at a NEWS website.²¹

Spectrum is the same whether in the largest markets or most remote wilderness: any spectrum allocation will never be close to used up in more remote areas if it is mostly used up in the urban areas. NEWS would put some of this excess capacity to use. AT 220 MHz licensees could elect to participate in NEWS and be "paid" via special tax breaks. If they do not so elect and participate, then they would loose certain amount of spectrum outside the more densely populated areas, and such spectrum would then be available to other entities to provide NEWS in the subject areas.

²¹ The website could be one of the most interesting and most visited: NEWS could include tens of thousands of remote sensors, some with visuals, and the data would be displayed in numerous formats, including interactive programs showing past, present, and projected states of ecosystems down to very localized environments of national, state, and regional parks, tourist areas, and cities and towns.

NEWS technology would be essentially the same as in commercial AT 220 MHz, with remote radios adapted as needed for NEWS applications and environments. NEWS could be added to a core commercial AT 220 MHz network for modest incremental cost (a small fraction of any stand-alone NEWS service). However, AT 220 MHz licensees would be given tax breaks for fair value of contributing a percentage of their commercial network capital and operating costs used to support NEWS: the tax savings could exceed such incremental cost and thereby be clear incentive. In addition, for corporate good-will as sponsors, and tax deductions, wireless equipment and service vendors would contribute products and services for NEWS. Such private entities would plan and develop news along with governmental entities involved with environmental protection and management of public lands.

In addition, the NEWS spectrum component of AT 220 MHz's 216-225 MHz should be available for dual-mode terrestrial wireless (mobile and fixed) and satellite, the latter so that a satellite service (government and/or private) could be teamed up with terrestrial coverage to fully cover the US.

Also, it could be investigated as to whether Canada and Mexico could coordinate with the US to develop the same NEWS service.)

NEWS could also serve to monitor conditions along the US highway systems. This information would be fed to public highway agencies, transit authorities, Telematics service providers and users, news services, and the general public (for navigation purposes, traveler advisories, etc.). In this regard, it could be coordinated with the two current Transportation Infrastructure Radio Services (LMS and 5.9 GHz).

Two-way paging. Contrary to Regionet (as cited in the NPRM), I do not believe the 200 MHz range is very suitable for two-way paging. A higher frequency is more suitable, such as the 900 MHz N-PCS used for Reflex. I was advised this by Motorola's Reflex division engineers as well as consultant engineers. The propagation characteristics of 200 MHz would be largely wasted if used in small two-way pagers, and building penetration (essential for pagers) at this frequency is not as good as at higher frequencies.

In addition, two-way paging is moving quickly from short pages to two-way Internet with far more speed and capabilities. E.g., leading two-way paging companies such as Arch are in need of more spectrum to move from two-way paging (Reflex) to wireless Internet.

A small 200-MHz range two-way paging service will fail for lack of spectrum, capacity, market share, vendor support, economies of scale, etc. (E.g., unless a vendor is convinced of an initial market for a new pager in the hundreds of thousands with substantial further growth the device will not be cost effective and the vendor will not commit to the product.) Rather, 216-225 MHz should be consolidated in a service as outlined herein as AT 220 MHz.

US Spectrum Reallocation
and Advanced Wireless Technology

Basic national infrastructure in today's highly technological civilization needs to be developed by the government along with the private sector. For example, the Internet and the US highway system could hardly have been established by private sector by itself. In wireless, the US is behind Western Europe, Japan, and other nations in wireless due in part to too much reliance on the "market" and too little active cooperation between public and private sectors involving longer-term planning.

Reallocation of Federal spectrum to the private sector should be coordinated with strong Federal support of US "4G" technology to better use such spectrum (and already allocated spectrum). There are orders of magnitude improvements possible via such technologies. In addition, the US economy will be stimulated via the wireless technology of US-owned and US-based companies achieving parity or superiority to the wireless technologies of companies of other nations, since companies with superior technology sell and license it worldwide.

DARPA 4G Wireless Project. In this regard, the US Defense Advanced Research Projects Agency (DARPA) Advanced Technology Office is currently planning a multi-year project to coordinate and facilitate such US 4G, with participation from private-sector entities (my company plans to participate) both for military needs and for use in the private and non-military public sectors.

Such 4G will likely include new techniques of noise suppression and interference excision, TDD-based dynamically allocated asymmetrical bandwidth on demand, "smart" antenna systems, and other means to greatly increase not only spectrum efficiency and

efficacy within a band, but also sharing of a band by several radio services, especially if such services design and coordinate their respective technologies and networks for this purpose. These 4G technologies could be used in the above proposed AT 220 MHz service involving the 216-225 MHz band, as well as in the other reallocation bands that are subject of the NPRM.

Respectfully submitted,

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[Filed 3-7-01]