

UNITED STATE OF AMERICA

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FEDERAL COMMUNICATIONS COMMISSION

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PUBLIC SAFETY NATIONAL COORDINATING COMMITTEE

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IMPLEMENTATION SUBCOMMITTEE

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THURSDAY

FEBRUARY 20, 2003

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The Subcommittee was called to order at 1:12 p.m. in Conference Room 7-B516 of the Federal Communications Commission, 445 12th Street, Southwest, Washington, D.C., Edward Dempsey, Chairman, presiding.

PRESENT:

EDWARD DEMPSEY	Subcommittee Chairman
DAVID EIRMAN	Member
BETTE RINEHART	Member
MICHAEL WILHELM	Designated Federal Official

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1 P-R-O-C-E-E-D-I-N-G-S

2 (1:12 p.m.)

3 CHAIRMAN DEMPSEY: Good afternoon. I am  
4 sorry about no agenda, and so I will just read it off  
5 basically. Briefly, I did a lot of printing this  
6 morning and forgot to print the agenda.

7 But what we are going to talk about today  
8 is essentially that we are going to review the changes  
9 made to the guidelines in draft regional plans that  
10 were a result of the Commission's review of Region 5's  
11 plan.

12 We are going to do our dtb transition  
13 status, and we were going to get something from the  
14 funding working group, but Tom could not get in. So I  
15 don't have anything from them.

16 MS. RINEHART: There was a handout, I  
17 think, in interoperability that talks about a kind of  
18 an update on their funding, and what CAPRAD has done.

19 CHAIRMAN DEMPSEY: We also have Dave  
20 Buchanon, who will give an update on what he is doing  
21 to resolve the issues that were brought up by the FCC  
22 with his plan. Sean O'Hara is going to give two

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1 presentations, one on the CAPRAD database pool  
2 allotments, and you did the wide band channel loading,  
3 and so it has been approved, and so we had you on the  
4 agenda for that.

5 We will do old business and new business,  
6 and then hopefully we will be done. Yesterday, we  
7 met with NPSTC to talk about several issues, but  
8 primarily what we asked NPSTC to do is based on the  
9 dismissal of Region 5's plan, and there were several  
10 items that came out of that, but the one that  
11 concerned us the most was the issue about the inter-  
12 regional dispute resolution.

13 And the FCC suggested that there be an  
14 agreement that would be part of the plan process  
15 whereby the adjacent regions would sign this  
16 agreement, and agree essentially to work out their  
17 differences if there is a dispute.

18 In the Implementation Subcommittee, we  
19 discussed this at length, and feel that that process  
20 we don't think will work very well. If there is an  
21 inter-regional dispute, and it is not being resolved  
22 by the two regions, we don't believe that telling them

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1 to go back and resolve it is going to make anything  
2 better.

3 We all know how long 20 and 28 went along  
4 with their inter-regional dispute. That was the only  
5 one, but rather than not -- rather than create  
6 (inaudible), we suggested that -- and this goes back  
7 to our earlier recommendations, that there be a  
8 national plan oversight committee.

9 And not to create, and we don't want to  
10 create another large organization or another member  
11 organization, and it would be comprised of the  
12 regional plan chairs throughout the country, and then  
13 there would also be a subset of those regional chairs  
14 that would be willing to participate in this regional  
15 plan process and dispute resolution process.

16 And essentially how it would work, and I  
17 will keep it brief as you can read about it in here,  
18 essentially how it would work is let's say that the  
19 region was two regions on the West Coast.

20 We would get five chairpersons from maybe  
21 the Midwest and the East Coast to participate in this  
22 panel. They would take a look at all of the

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1 documentation provided by the disputing regions, and  
2 they would either make a recommendation to the FCC as  
3 to what the resolution is, or they could come up with  
4 a resolution that would even be better than what the  
5 two disputing regions have suggested in their  
6 documents.

7 And essentially the idea would be to keep  
8 it as neutral as possible, and we don't believe -- and  
9 let me take a step back. The FCC suggested that if  
10 the regions don't come to agreement, it would be then  
11 given to the four frequency coordinators.

12 We didn't believe after discussing this  
13 again at length that that was a good process, because  
14 there may be some involvement of the frequency  
15 coordinators in this dispute.

16 It could be that two frequencies were  
17 coordinated improperly, and they might have been  
18 assigned improperly, and having the people that are  
19 doing these frequency assignments then be part of the  
20 resolution process I think would be -- it may cause  
21 problems.

22 Not that there have ever been problems

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1 during frequency coordination. I think I have a whole  
2 box of -- no, never mind. I have a volume of  
3 documents. Who was that, Greco Concrete, and that is  
4 another one.

5 So the suggestion in here, and we made  
6 some revisions to the FCC suggested regional plan  
7 dispute process, as well as we also put kind of like a  
8 straw man process in there for what we believed would  
9 be the dispute resolution process.

10 And essentially -- and I will just review  
11 it real quick, but the process again as I mentioned,  
12 there would be a list of regional chairs willing to  
13 participate, and when two or more regions cannot  
14 resolve it, they would request the NPOC to intervene.

15 There would be a notification process that  
16 we believe has to be part of that to the FCC. Five  
17 members will be chosen from the list as long as they  
18 are neutral.

19 Now, the disputing regions will submit  
20 documents detailing their position in any relevant  
21 backup material. Five members will get together --  
22 conference call, however they want to do it -- and

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1 review the information.

2           There would be prescribed sets of time  
3 limits so that it would not drag on forever. And then  
4 they would make recommendations to the FCC for some  
5 type of approval and resolution.

6           And that there has to be this inter-  
7 regional agreement signed by the regions, number one,  
8 to get their plan approved. It has to be part of that  
9 that they are willing to be part of this process.

10           So you can read all about that in there,  
11 and we are going to submit this to the steering  
12 committee for recommendation, and in that process  
13 then, by the time of the next meeting, if there are  
14 any changes, we will have that and we will just adjust  
15 it to what we submitted to the steering committee.  
16 Steve.

17           MR. DEVINE:       Steve Devine, State of  
18 Missouri.       The difficult question is if there is  
19 money involved, who pays for it, for these people? If  
20 there is money, whether it be conference calls,  
21 travel, whatever it is, does that have to be  
22 identified before it can become criteria for plan

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1 approval? And are you saying that --

2 CHAIRMAN DEMPSEY: I am not -- with money  
3 involved --

4 MR. DEVINE: To put those five people  
5 together and to have them do X-amount of oversight  
6 work to come to some conclusion, if there are costs  
7 associated with that -- and I am not saying that there  
8 will be, but if there are, does that have to be  
9 identified as to who is going to pick that up?

10 CHAIRMAN DEMPSEY: I don't think I would  
11 assume anything, but I would assume that it is just  
12 the same process that has been going on for regional  
13 planning for years, which is that we don't get  
14 reimbursed. Nobody is going to pay me back for the  
15 Kinkos this morning.

16 MR. DEVINE: Right.

17 CHAIRMAN DEMPSEY: Unless we have a fund.  
18 Do we have a budget for that?

19 MR. WILHELM: We have a continuing  
20 resolution.

21 MR. DEVINE: With the advent of the RPC  
22 funding, I was just curious. It does not have to be

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1 there, but also you are saying that the agreement to  
2 participate and to accept the recommendations of the  
3 planning oversight committee would be required at plan  
4 approval? In other words, that would be --

5 CHAIRMAN DEMPSEY: I think that was my  
6 interpretation of the FCC suggestion, and I think that  
7 that is a good idea, and that this agreement has to be  
8 part of the plan process, because otherwise, if there  
9 is -- if you are not going to agree to any resolution,  
10 such as binding arbitration (inaudible). Don.

11 MR. ROOT: Don Root, Region 6. Do you  
12 have any concept as to how the five arbitrators would  
13 be selected? I mean, I think there should be some  
14 relevance. I don't think that Hawaiian, Alaskan, and  
15 Puerto Rican chairs should be trying to resolve a New  
16 York dispute.

17 CHAIRMAN DEMPSEY: No, they would have to  
18 be -- and again that could be filled out more, but if  
19 you look at the document, it is essentially that we  
20 would like them to have no connection with the  
21 particular regions that are disputing, but that they  
22 would have to -- you know, and we --

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1 MR. ROOT: Have some understanding of it.

2 CHAIRMAN DEMPSEY: Yes.

3 MR. ROOT: And the geography.

4 CHAIRMAN DEMPSEY: Yes. And you are  
5 right. The Alaskan guys will probably say what is the  
6 big deal, you know. And of course what we have in  
7 here is just the beginning of the process. I mean, we  
8 don't even know if the FCC is going to agree to that  
9 process.

10 And it is our opinion that we don't  
11 believe that giving it back to the four frequency  
12 coordinators would really work very well.

13 MR. NASH: Glen Nash with the State of  
14 California. I really would like to return to Steve's  
15 question though, and I think that funding is an issue  
16 here. All of us participate in the regional planning  
17 process at our own expense, but that is because we  
18 also have an interest in what goes on within that  
19 process, because it is our region.

20 As you now look at trying to put together  
21 this dispute resolution committee, these are people  
22 who -- and your specific statement, who have no

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1 interest in the resolution of it, other than their  
2 willingness to act as an arbiter.

3 And so therefore, you know, the ability to  
4 bring them together is an issue, and why would my  
5 governmental budget people be willing to put up money  
6 to send me across the country to resolve a problem for  
7 New York, and that is the question that is going to  
8 get asked.

9 CHAIRMAN DEMPSEY: We could then talk to  
10 the funding committee from NPSTC and --

11 MR. NASH: And so I would suggest that the  
12 expense for these arbiters should be something that  
13 the two, or the disputing RPCs need to come up with  
14 the funding to support, and even if it is done as a  
15 conference all, there is a cost for that as well.

16 CHAIRMAN DEMPSEY: I think though what we  
17 should do is see if the FCC is willing to even  
18 consider this before we address the funding issue. I  
19 am not envisioning this to be a process though where  
20 these guys are traveling across the country.

21 In the previous days on the megahertz  
22 planning process, there was one dispute. And I don't

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1 want to make an issue of something that might not --  
2 but I agree that if there is funding that we would  
3 have to come up with some way, and so we will add that  
4 language to the proposal.

5 MR. NASH: It is the responsibility of the  
6 two RPCs.

7 CHAIRMAN DEMPSEY: Yes, and which may work  
8 to solve the dispute quicker. I have to pay how much  
9 to get this guy from where, and so maybe Alaska, and  
10 Puerto Rico, and Hawaii will work.

11 MR. EIRMAN: Only when you hold the  
12 meetings there.

13 CHAIRMAN NASH: Yes, that's true. Good  
14 point. The other issue is that we included in our  
15 recommendation and letter to the FCC our request to  
16 ask the steering committee to reconsider several of  
17 our recommendations.

18 One, making the database mandatory, and  
19 two -- where is it -- oh, yeah, handling of the other  
20 four regions, and we included that information in this  
21 document also.

22 The database now is functional, and it has

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1       been demonstrated several times. So we believe that  
2       at this point now that another demonstration of the  
3       database directed at the FCC's technical people might  
4       convince them that this is a real viable solution to  
5       this, and that hopefully that will convince them to  
6       consider it again.

7                   And so we are asking the steering  
8       committee to  
9       -- to urge them to consider the use of the database,  
10      and make it mandatory, as well as to give us another  
11      shot in demonstrating that the database does work.

12                   And it may be just as we discussed  
13      yesterday at the NPSTC meeting, it may be a session  
14      where we bring the designers of the database, and sit  
15      them down with the FCC technical people, and let them  
16      go over or go through all of the scenarios. John.

17                   MR. POWELL: John Powell, for NPSTC. Just  
18      for information, pending resolution of the Federal  
19      budget, there is planning underway to put together a  
20      demo for whatever Commission staff would like to see  
21      on the database as quickly as we can do that.

22                   CHAIRMAN DEMPSEY: Dave, do you want to

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1 talk about before we go into what changes we made, do  
2 you want to talk about your -- or do you have  
3 something else?

4 MR. BUCHANON: Well, I was wondering when  
5 we were going to talk about -- we have gone over that  
6 NPO or whatever it is called now, but the actual model  
7 itself, I have a couple of things that I would like to  
8 bring up about what you put together just to get some  
9 feedback and discussion here.

10 CHAIRMAN DEMPSEY: Okay. If you want to  
11 do that now, that's fine.

12 MR. BUCHANON: And this is Dave Buchanon,  
13 for the County of San Bernadino, Region 5. The way  
14 this is written now in the agreement itself, every  
15 application has to go to each of the adjacent regions,  
16 which I don't think that Arizona wants to get all of  
17 the applications that Orange County and L.A. County  
18 are going to generate.

19 I would suggest that we put in a clause  
20 that it is only with 70 miles of the adjacent region,  
21 or the equivalent in kilometers. Applications. You  
22 see, this addresses --

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1 CHAIRMAN DEMPSEY: What page are you on?

2 There is no page number here.

3 MR. BUCHANON: Inter-region coordination  
4 procedure. The inter-regional coordination agreement  
5 is talking about applications and not plans.

6 CHAIRMAN DEMPSEY: Right.

7 MR. BUCHANON: So the way it is written,  
8 every application would have to be sent to each  
9 adjacent region, which may make sense in some of the  
10 smaller regions where there is -- where everything is  
11 impacted, but in our case, I can tell you that I could  
12 care less how many applications and what they do in  
13 Phoenix.

14 MS. RINEHART: The Footnote 1 there, I  
15 think, is supposed to indicate that only if that  
16 application service area overlaps the adjacent region  
17 would it go.

18 MR. BUCHANON: Well, that includes my  
19 county, which is 200 miles wide.

20 MS. RINEHART: And the service area would  
21 overlap in Arizona?

22 MR. BUCHANON: You can interpret it that

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1 way. I wanted to just narrow it down, and it says  
2 that if the station or if the location of the bay  
3 station that is referred to in the application,  
4 obviously it is a mobile only, and I asked for the  
5 whole county, that should go to them.

6 But for a bay station, which may refer to  
7 a license that is -- that has a mobile only, but if it  
8 is in San Bernadino, there is no reason that they care  
9 in Arizona. I mean, that is over a hundred miles  
10 away, and close to 120 or 130 miles.

11 MS. RINEHART: So your suggestion is that  
12 it would say that if the bay station was more than --

13 MR. BUCHANON: Less than 70 miles from the  
14 border with the adjacent region, then it would have to  
15 be coordinated with that adjacent region.

16 MR. POWELL: And add that language to the  
17 footnote?

18 MR. BUCHANON: I don't care. In the  
19 footnote or in the base.

20 MR. POWELL: Or if the service area  
21 overlaps into --

22 MR. PICKERAL: And/or it seems to me.

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1                   MR. BUCHANON: And that's fine, and I just  
2 wanted to narrow it down so that the FCC didn't come  
3 back and say, oh, no, you have to coordinate with  
4 wherever, but --

5                   CHAIRMAN DEMPSEY: Alaska.

6                   MR. BUCHANON: Yes or Hawaii. I guess  
7 they could be adjacent to us, too, huh? Under F on  
8 the next page, it is giving 60 days, and that seems  
9 like a lot of time for them to review, and I would  
10 suggest no more than 30 days, unless I get feedback  
11 from other people that they don't think that we could  
12 handle that.

13                   MR. DEVINE: Steve Devine, State of  
14 Missouri. I think that 60 days was at least in some  
15 of the conversations that I have had for regions that  
16 have not formed, they have to provide notice for 60  
17 days. So I think that the number 60 has been kind of  
18 used in case somebody had to convene to review an  
19 adjacent state, and if we only gave them 30 days, they  
20 wouldn't officially provide enough notice. So that is  
21 perhaps where that was generated.

22                   CHAIRMAN DEMPSEY: This was the language

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1 suggested by the FCC, and we just left it the way that  
2 it was.

3 MR. BUCHANON: Yes. I am just suggesting  
4 that it doesn't need to be that. I think on Steve's  
5 point that this would not be forming regions though,  
6 because this is an agreement after the fact.

7 CHAIRMAN DEMPSEY: And this by the way is  
8 if the regions -- this has to be between formed  
9 regions.

10 MR. BUCHANON: Right. That is the only  
11 way that you can do this.

12 CHAIRMAN DEMPSEY: So we will make it 30  
13 days then. Again, we are submitting this to the FCC  
14 to look at.

15 MR. PICKERAL: Can we go back to the  
16 footnote to the and/or. I would just like to know how  
17 they can conduct.

18 CHAIRMAN DEMPSEY: Well, certainly if it  
19 is a mobile application, and you say, for instance,  
20 county-wide, then that would have to be coordinated  
21 with the adjacent region if it abuts up.

22 But if it is nowhere near the adjacent

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1 region -- and that's why I am saying that if it is  
2 within 70 miles of the adjacent region that it should  
3 cover it, and it shouldn't matter about service area.

4 MR. DEVINE: Excuse me, Dave, one second.  
5 Steve Devine. The database will do this. The  
6 database will literally notify adjacent regions when  
7 an application has been submitted from a particular  
8 region. So we are not talking about somebody who is  
9 completely blind to the facts here.

10 We are talking about that after a certain  
11 point there isn't any acknowledgement, I can't help  
12 but think that the database is already doing this  
13 work.

14 CHAIRMAN DEMPSEY: But keep in mind that  
15 the database is not mandatory. So if we don't have  
16 the right language in here, it could be coordinated  
17 improperly and there is no way we would ever know  
18 until somebody (inaudible).

19 MR. POWELL: John Powell. Let me make a  
20 suggestion that it read for any bay stations within 70  
21 miles for any station whose service area overlaps the  
22 adjacent region. That takes into account your mobile

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1 only's, or some high level station that could go  
2 beyond 70 miles. That would take care of that.

3 CHAIRMAN DEMPSEY: Dave.

4 MR. BUCHANON: And that is good language.

5 I agree with that. I think the issue is not so much  
6 that CADRAD will notify it. It is the fact that you  
7 don't want it to notify them of too many things,  
8 because then they are just wasting their time giving  
9 you back a concurrence.

10 CHAIRMAN DEMPSEY: I agree.

11 MR. BUCHANON: I think that the last thing  
12 that I noticed is just that there is still a reference  
13 to next day delivery system going down that page to  
14 the last sentence under one, and maybe that should be  
15 e-mail instead, because CADRAD is going to e-mail  
16 everything.

17 And by the way, just for everybody's info,  
18 I did -- when all of this came up and I turned it back  
19 to Ted and to Betty, I talked to Dave Funk with the  
20 CADRAD system, and it was very minor modifications,  
21 and I think they have already done the modifications  
22 to handle this agreement, and so it worked out pretty

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1 good. And other than that, I think it looked good,  
2 and so I am happy.

3 CHAIRMAN DEMPSEY: So change the overnight  
4 mail delivery.

5 MR. BUCHANON: And so change the next day  
6 to e-mail delivery, and by e-mail. The overnight mail  
7 delivery is kind of old technology, and so we want the  
8 FCC to stay up. Would you like me to go over now what  
9 we are doing?

10 CHAIRMAN DEMPSEY: You might as well go  
11 over what you are going to do to resolve it.

12 MR. BUCHANON: Well, some of the issues  
13 were kind of minor. It was more like just  
14 explanations or some administrative matters. The  
15 biggest thing in the letter that they sent back was  
16 the notification of the tribal outreach, and I asked  
17 around everybody in our region how do we get a hold of  
18 the Indian tribes, and nobody had a clue.

19 Finally, we kept looking, and we got a  
20 little bit of information, but finally through  
21 searching through the internet, I found a site that  
22 listed all the addresses, and actually it is on a

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1 state-by-state basis, and so then I had to further  
2 refine it based on being either in Southern California  
3 or Northern California.

4 And it turns out that for me, for Southern  
5 California, it is about 70 tribes. We also found that  
6 -- and when my secretary sent out letters notifying  
7 them, a few of them came back, but they seemed to have  
8 corrected addresses, and so we sent that back.

9 I don't think -- and I talked to Jeanne  
10 about that, that it did not have to be a hundred  
11 percent notification, but you had to make a really  
12 good effort to notify them all.

13 So we have sent out letters, and we are  
14 having another meeting in April inviting them to  
15 participate if they want to. I am hoping -- and to be  
16 honest, I doubt that any of them will sign up. These  
17 are all in rural areas, and they are not impacted, and  
18 they don't really care about operating.

19 The few of them that have tribal police or  
20 whatever, have maybe one or two on their tribe, unless  
21 they have got casino operations, and then they will  
22 have a security tribal police for that. But that is

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1 very localized. That is not a wide-area thing.

2 So I don't know of any particular needs  
3 that they have, and we get requests from them every  
4 once in a while.

5 CHAIRMAN DEMPSEY: I think the bottom line  
6 for that is that you just have to show that you made  
7 the effort --

8 MR. BUCHANON: Made the effort, yes.

9 CHAIRMAN DEMPSEY: -- to reach out to them  
10 and that will satisfy it.

11 MR. BUCHANON: So that was a major hurdle,  
12 but I passed that information and it should be on the  
13 NPSTC website where you can find those tribes for your  
14 own regions.

15 MR. EIRMAN: And we have about 12, and we  
16 probably found the same ones.

17 MS. RINEHART: And if you just look at the  
18 list of websites that we put in here like for  
19 informational purposes to make sure that the one that  
20 you found is one of the ones that we found.

21 MR. BUCHANON: Okay. And by the way, I am  
22 going to loan Steve Devine some Indian tribes so that

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1 he doesn't feel left out.

2 MR. DEVINE: And they won't get along with  
3 the Hatfields and the McCoys.

4 MR. EIRMAN: That raises a question. Is  
5 it just tribes or is it tribes that have reservations?  
6 There is a distinction there.

7 MR. BUCHANON: I didn't make a  
8 distinction.

9 MR. EIRMAN: Like thee are no reservations  
10 in the State of Missouri. There are some recognized  
11 tribes within the State of Missouri.

12 MR. BUCHANON: I did not make a  
13 distinction. If it turned up as a recognized tribe,  
14 I sent them a letter and made the outreach. So maybe  
15 he needs to do that. Anyway, we are doing that, and  
16 I am trying to think of the other issues that they  
17 had.

18 So we are having another meeting to  
19 resolve that. I am rewriting to include what they  
20 wanted and they didn't -- I guess mainly you have just  
21 got to explain everything quite a bit, because even  
22 some things that I thought that I had explained, they

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1 didn't like.

2 For instance -- oh, what did they  
3 question. Oh, they questioned unformed regions, and  
4 we are addressing that because the regions are formed  
5 now. In fact, getting this wording down today will  
6 help me a lot, because now I can take this agreement  
7 and get it to the other regions and hopefully we can  
8 all agree on this format.

9 And if that propagates throughout the  
10 nation, it will be pretty uniform. So that would be  
11 good.

12 CHAIRMAN DEMPSEY: And Mexico.

13 MR. BUCHANON: Yes, the Mexico border.  
14 That one frankly upsets me a little. All I thought I  
15 was putting in there was a reference that they if they  
16 are going to do treaty negotiations to please inform  
17 our region so that we could keep up with what is  
18 happening, because the treaty, any changes or anything  
19 that impacts our allocation of frequencies, means that  
20 we have to go back and revisit our plan.

21 And we would like to have at least some  
22 input to that, and they were quite emphatic that that

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1 was something that was done between them and the State  
2 Department.

3 Well, that was not the case at 800. We  
4 had a lot of input and we were able to present ideas  
5 and plans. Yes, the negotiations have to happen  
6 between the FCC and Mexico, but I wouldn't think the  
7 input would, and I think I am going to comment on that  
8 at least when I send them back a letter on the plan,  
9 because I don't think that was a position that -- and  
10 maybe they misunderstood or something that as an  
11 issue.

12 CHAIRMAN DEMPSEY: And we are going to  
13 have to do a little bit more work on that, too.

14 MR. BUCHANON: Yes, and I don't know what  
15 is going to happen, but certainly the regional plan  
16 groups along the borders need to know what is going on  
17 with any treaty changes. Otherwise, you know, we will  
18 be impacted and possibly with no input at all to it.

19 And any change that you make in our case  
20 with San Diego impacts the whole region. I think that  
21 was the main points, and the real difficulties will  
22 be, and what we are going to do is rewrite some of the

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1 plan, and get out the notifications, or request the  
2 regions for concurrence in this inter-region dispute.

3 We have a work group meeting in March that  
4 will look at some of that, at least where we are at,  
5 and some of the -- just the wording changes in the  
6 document.

7 It is not changing any of the allocations,  
8 and so I don't think that anybody is going to really  
9 care, and then we will have another formal meeting in  
10 April and try to document that.

11 CHAIRMAN DEMPSEY: So when do you think  
12 that you will be resubmitting your plan?

13 MR. BUCHANON: At the end of April, the  
14 first of May.

15 CHAIRMAN DEMPSEY: Okay. Because what we  
16 want to do is -- what I think, too, is that we will  
17 have to get some feedback from the FCC on the dispute  
18 process, and so I don't want you to -- obviously you  
19 don't want to put in an agreement that they are not  
20 going to approve, and so we have to -- and so I think  
21 we will try to get some feedback right away.

22 MR. BUCHANON: But I do need to get that

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1 sent out pretty quick and give the other regions time  
2 to take a look at it. So I think I will probably send  
3 out what is here for now, and if there is some issue,  
4 I would like to know about it right away so that we  
5 can change it.

6 CHAIRMAN DEMPSEY: Okay. That might be  
7 the best approach.

8 MR. BUCHANON: I think that is about it.  
9 That is where we are at.

10 CHAIRMAN DEMPSEY: Okay. And Betty will  
11 go into some more detail on the changes that we make  
12 to the guidelines in template, but essentially what we  
13 did was that we took whatever recommendations that the  
14 FCC made, and added them, or modified the guidelines  
15 so that it reflects any of those suggestions or  
16 recommendations, and in some cases we may have to  
17 modify or add some language, which we will work on  
18 between now and the next meeting, just to better  
19 explain that.

20 And the idea is just to be clear, and to  
21 make a good explanation of why or why you didn't do  
22 something, and that might satisfy some of the

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1 requirements.

2 MR. BUCHANON: There is one other thing  
3 that should be pointed out on the border issues, and I  
4 think it affects both Canadian and Mexican, and that  
5 is that the FCC wanted a clear statement in there that  
6 it is secondary.

7 That anything that you do now is secondary  
8 to any broadcast use in the order areas, and so if you  
9 interfere with -- I guess they can interfere with you,  
10 and that's okay, but you can't interfere with their  
11 broadcasting until the treaties are changed.

12 So that is something that any of the  
13 border regions should be aware of.

14 CHAIRMAN DEMPSEY: And to put language in  
15 there.

16 MR. BUCHANON: Yes, and you have got it in  
17 there about that.

18 CHAIRMAN DEMPSEY: I think you can  
19 reference the rules, and that is verbatim in the rules  
20 section.

21 MR. BUCHANON: Yes, I was just going to go  
22 with the language that they suggested.

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1 MS. RINEHART: Right, that makes sense.  
2 As far as the working group and what they went through  
3 for policy recommendations, went through the existing  
4 documents that were prepared for regional planning,  
5 and we added a few documents as well.

6 The ones that we modified were the draft  
7 national plan, the guidelines document, and Appendix  
8 R, which is the checklist. And just to use as you are  
9 ready to file your plan, and just to make sure that  
10 you have a final check, and you know exactly that you  
11 have everything that is required under 90.527.

12 The other thing that we added to the  
13 checklist is a reference so that you can put where it  
14 is. Like 90.527(a)(1), is answered in this section,  
15 and this section, and this section under plan.

16 And we figured that would be useful for  
17 the regional planning committees, as well as the FCC,  
18 because when you are looking for this, okay, it can be  
19 found here, here, and here. Maybe it is an appendix  
20 and that it doesn't necessarily flow right through.

21 The other thing that we added to the  
22 guidelines were some additional websites to go for

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1 information, like on the tribal governments, and where  
2 to find contact information for them, and contact  
3 information for FEMA and that sort of thing.

4 And the ones that we added were Appendix  
5 T, because in the meantime the FCC released public  
6 notice giving a file number that has to be referenced  
7 in all regional plans. So we drafted a sample cover  
8 letter to be used in submitting the plan.

9 And then Appendix U, and it was a new  
10 checklist that we developed and that is just for your  
11 first meeting so that you can go through this and kind  
12 of say, okay, we have notified these people, and this  
13 agency, and hopefully that will be helpful for regions  
14 that have not yet held their first meeting.

15 And so all those documents were  
16 distributed, and Ted distributed them over the list  
17 serve last week, and I don't believe that any feedback  
18 -- we didn't get any feedback, and so unless anybody  
19 has any feedback on those documents today, I think the  
20 working group would like the committee to formally  
21 recognize those changes, and that they can be  
22 forwarded on to the steering committee.

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1                   CHAIRMAN DEMPSEY:    So we will then take  
2 these changes, or these documents, and forward them to  
3 the steering committee.

4                   MS. RINEHART:     And of course the other  
5 place they have to go is in the guide books that go to  
6 the regional planning committee.

7                   CHAIRMAN DEMPSEY:   Yes, once the steering  
8 committee commits, then we will send this off to John.

9                   MS. RINEHART:     And there was one other  
10 thing.

11                  CHAIRMAN DEMPSEY:   Well, I just want to --  
12 well, let me just say that there was something that  
13 came up at the NPSTC meeting yesterday about the use  
14 of the websites and the addresses that we have  
15 provided.

16                  And it might have been a little confusing,  
17 because evidently some people have tried to reach out  
18 to these organizations, and just sent them mailings,  
19 or sent them an e-mail, and then the organization gets  
20 back and says, gee, we don't know what you are talking  
21 about.  Don't ever mail us again.

22                  The intent of those websites was to work

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1 with and showing what agencies or what organizations  
2 had websites. So if you did want to post it on, let's  
3 say, ISACP or AVCO, it may be just a little bit more  
4 than just sending them an e-mail and saying here it  
5 is, but those were just for informational purposes  
6 only, and not to be meant to -- you know, start  
7 sending them random e-mails.

8 I mean, you may be accused of sending  
9 SPAM, I guess, after a while, and so we will look at  
10 that, and maybe we have to clarify it in the  
11 guidelines a little bit more.

12 But again that was just a point of  
13 confusion yesterday at the NPSTC meeting. So I  
14 thought I would just mention it here today. And then  
15 the last piece is the handling of unformed allegiance.

16 MS. RINEHART: That is on the next to the  
17 last page of your handout, and this is something that  
18 the Implementation Subcommittee had developed and  
19 submitted I guess in its year two report to the  
20 Commission.

21 And, of course, at that time the many of  
22 the regions had not yet formed, and there are still a

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1 few that have not -- at least the last time that I  
2 checked the database, which was a couple of weeks ago,  
3 they had not selected a convener even.

4 So, for instance, like Colorado, is  
5 working on a regional plan, and they are close to  
6 having a final plan ready, but Utah doesn't have a  
7 convener and New Mexico doesn't have a convener the  
8 last time that I checked.

9 So they don't even have anybody to contact  
10 in their adjacent region. So one of the things that  
11 we had originally suggested was that as long as the  
12 region who was coming in and had developed its plan  
13 took the interest of the adjacent region into  
14 consideration, and set aside a certain amount of  
15 spectrum at the borders to cover that region so that  
16 when they would get together and form that they  
17 wouldn't find themselves completely shut out of  
18 spectrum.

19 And then that would be acceptable, and  
20 that there is really -- you know, you can't hold up  
21 your plan and waiting for a region who may never  
22 really need 700 for some time, and there had to be a

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1 mechanism that you could go ahead and file.

2 MR. BUCHANON: There is one issue -- and  
3 this is Dave Buchanon again -- in here on that process  
4 for handling unformed regions. It says that a waiver  
5 of the adjacent -- you have to file a waiver of the  
6 FCC rules or something. Is that what that is  
7 referring to, and are regions going to be faced with  
8 that?

9 MS. RINEHART: That is a concern, because  
10 that is something that was brought up in the NPSTC  
11 meeting yesterday, and Jeanne was there, and indicated  
12 that that would be the best -- because it is a  
13 requirement, that you would have to file a waiver.

14 The concern there is that whenever you  
15 have a waiver, it adds processing time historically,  
16 but most recently what has happened anytime that you  
17 have a waiver is that it goes out on an additional  
18 public notice, and which adds to the processing time  
19 as well.

20 So, yes, I think it is a concern.

21 CHAIRMAN DEMPSEY: However, I think that  
22 what we can do is if there is an unformed region

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1 adjacent to your plan, then maybe ask for the waiver  
2 in the plan, and maybe that waiver could be considered  
3 as part of the process.

4 It may extend some time a little bit, but  
5 if it is all part of the original process, the FCC may  
6 consider that.

7 MR. BUCHANON: We ought to try to find out  
8 for certain on that. I mean, it doesn't affect me  
9 now, but it could potentially in the added final form.

10 CHAIRMAN DEMPSEY: We realized that after  
11 yesterday, and we are going to address that.

12 MR. BUCHANON: Okay.

13 (Simultaneous multiple discussions.)

14 CHAIRMAN DEMPSEY: Sorry about the page  
15 numbers, folks. I just wanted to make it a challenge  
16 today.

17 MR. EIRMAN: I guess with Steve, we have  
18 had a lot of discussion about what to do about -- you  
19 know, about the --

20 CHAIRMAN DEMPSEY: Do you want to explain  
21 the scenario?

22 MR. EIRMAN: It is about Item 13 in that

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1 long list of things that we have got to do. Go ahead,  
2 Steve, and you explain why we even got into this  
3 discussion to begin with.

4 MR. DEVINE: Steve Devine, State of  
5 Missouri. The discussion centered around the scenario  
6 -- and while it has not happened yet, it might -- that  
7 in a particular county that was developing a simulcast  
8 type system at 12-1/2 kilohertz, it is quite possible  
9 that the residual remainders, the channel remainders,  
10 would be left in that county, and quite possibly  
11 wouldn't be able to be used effectively due to the  
12 nature of the system design.

13 And this has kind of led to the idea of  
14 what is a plan amendment, and how can I move those  
15 channels away from that county area, which is actually  
16 the geographic area where the channels -- where the  
17 pool allotment was covering, and how can I move those  
18 remainder channels away to make some use out of them  
19 with regard to spectrum efficiency.

20 And what we have kind of done here, and I  
21 don't know, but have you modified this language to  
22 some degree? This had several scenarios as to whether

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1 -- you know, I can move it 6 miles, or 10 miles away  
2 from the county and get some use out of that other  
3 half, that adjacent 12-1/2.

4 But if I move into another county does  
5 that require a plan amendment. So that was where we  
6 started, and that is probably enough fuel for that.

7 MR. EIRMAN: And Steve was in the middle  
8 of trying to write his Missouri plan while we were  
9 discussing this. So, I mean, the issue is that we  
10 decided on using 15 kilohertz band width with this  
11 pre-sort allocation, because it is theoretically  
12 technology neutral.

13 And as agencies choose their technology,  
14 basically they could choose a 25 kilohertz band width  
15 technology, or a 12-1/2, or a 6-1/4. And you end up  
16 with orphan channels.

17 You know, pieces of that original 25 that  
18 can't be used at the same exact site as the original  
19 or whatever the user implemented, and it would have to  
20 be used somewhere else and what are the limitations on  
21 that.

22 Bernie Olsen and I did some analysis, and

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1 if you are looking at Project 25 technology, that  
2 adjacent channel can go about 5 miles or less outside  
3 of your service area boundary. If it is other  
4 technology, it has got to be further away.

5 So you end up being where that orphan  
6 piece can be used can very readily fall outside of the  
7 original geographic boundaries where it was allocated.

8 MR. DEVINE: Steve Devine, State of  
9 Missouri. To complicate matters, the regional -- with  
10 regard to the database and access to the database, I  
11 believe there is three stages or three environments.  
12 One can literally create their plan and leave it, and  
13 let people just select channels from it.

14 There can be a certain degree of oversight  
15 and concurrence from the region when an application  
16 comes through, or there can be a maximum amount of  
17 oversight.

18 If one were to leave that, then the  
19 determination of channels to be used in a particular  
20 county, if it was left strictly to the licensee, or to  
21 the license preparer, let's say, and those channels  
22 were taken, of those 20 or 15 kilohertz channels in a

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1 county, if someone wanted to build a system, they  
2 literally would leave the residual of all of those,  
3 and without some oversight -- and there is the  
4 potential within the database for there to be minimal,  
5 or absolutely no oversight whatsoever by the RPC. And  
6 so that could create a scenario where we are not  
7 efficient, and we have got some wasteful spectrum.

8 MR. EIRMAN: So we got into the discussion  
9 about the efficiency issue that if it could not be  
10 used in the same county, what would end up, and if you  
11 move it outside the county, what scenarios do you get  
12 into.

13 And do we have to go and modify the plan  
14 every time we move an orphan channel within the  
15 county, or outside the county. You know, more than so  
16 many miles away.

17 So in looking at this, and going back and  
18 forth about a half-a-dozen times between Steve, Betty  
19 and I, and a couple of other people, we came up with  
20 this language here about that you didn't need to make  
21 a plan modification if you only moved it so far.

22 And if it moved further, then you would

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1 have to modify the plan, or if it affected the  
2 adjacent region, you would have to modify the plan.

3 MR. BUCHANON: Couldn't you just -- and  
4 this is Dave Buchanon again, but couldn't you just put  
5 a clause in your plan that says that -- because you  
6 are going to know if there are orphan channels,  
7 because if the applications are all coming to you, you  
8 will know which technology that they use, that any  
9 orphan --

10 MR. EIRMAN: Do you know at the time of  
11 application what technology that is used?

12 MR. BUCHANON: Well, if they are going to  
13 file band widths --

14 MR. EIRMAN: Or band widths.

15 MR. DEVINE: Steve Devine. I mean, if you  
16 are going to move that outside that county, that  
17 adjacent statement, and I concurred with the theme  
18 there, but I don't know if I concur with the theme at  
19 this point.

20 MR. BUCHANON: That is true, but they  
21 should be able to say that, because that impacts  
22 whether they are using it.

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1           MR. EIRMAN:   That actually is the only  
2 language that we had in there originally, was that the  
3 orphan channel reverts to the general pool, and then  
4 we had this discussion about, okay, once you revert it  
5 to the pool, what do you do with it?  How do you move  
6 it.

7           If you can't use it at this site, then how  
8 do you move it?  What happens if you can't use it, and  
9 it would be best to maybe -- this county has got an  
10 orphan channel, and this one has got an orphan  
11 channel, and if you swapped the orphan channels.  Now  
12 is that a plan modification?

13           MR. BUCHANON:  Absolutely.

14           CHAIRMAN DEMPSEY:  Yes, I see what you are  
15 talking about.

16           MR. EIRMAN:       So we got into this  
17 discussion about how do you move these things around  
18 without having to submit a new document to the FCC  
19 every time you move one.

20           CHAIRMAN DEMPSEY:  Every time you get an  
21 application.

22           MR. EIRMAN:  Yes.

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1 CHAIRMAN DEMPSEY: Sean.

2 MR. O'HARA: Sean O'Hara, Cirrus Research.

3 I have got a couple of slides on this issue, and so I  
4 guess before you close discussion on it, you might  
5 want to wait until after the presentation also,  
6 because they may shed some light on some of the  
7 thinking on this.

8 CHAIRMAN DEMPSEY: Any other discussion on  
9 this?

10 MR. EIRMAN: Well, what we recommended  
11 here is that if you are already in the county, you  
12 don't really have to do anything, and if you want to  
13 move it within 10 miles of the county border, which is  
14 basically swapping across to the adjacent county or  
15 something, we don't think there should need to be a  
16 need for a plan change that has got to be submitted to  
17 the FCC.

18 I mean, we are basically trying to be more  
19 spectrum efficient by adjusting these things around so  
20 that they fit in so that we can actually use all the  
21 channels.

22 Once you get to moving it more than 25

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1 miles, you are probably in a lot of places essentially  
2 moving it two counties away or something. Then we are  
3 into some type of modification of the plan.

4 Or if you are moving it in an area that is  
5 near another region's border, then you have got to  
6 take into consideration what happens across the  
7 border, or it may be spectrum efficient to swap those  
8 halves across the border. Again, the trading issue, a  
9 horse trading issue.

10 So that is our recommendation, is that  
11 some changes within maybe less than a 25 mile radius,  
12 you don't have to change the plan. If you are going  
13 to affect an adjacent region over 25 miles, then you  
14 probably have got to submit an amendment to the plan.

15 MR. DEVINE: Steve Devine, State of  
16 Missouri, and in that scenario, it requires two plan  
17 amendments.

18 MR. EIRMAN: Correct.

19 CHAIRMAN DEMPSEY: Okay. Any further  
20 discussion on the orphan channels?

21 PARTICIPANT: Adopt them now.

22 CHAIRMAN DEMPSEY: Dave, do you want to

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1 give your DTV transition report?

2 MR. EIRMAN: A couple of topics here. the  
3 number of stations that are -- well, what is the  
4 progress of DTV transition, and I see that Kurt Knight  
5 is here. I looked up some stuff on the low power t.v.  
6 secondary and licensing issues that Kurt has raised  
7 before.

8 And then there is -- the FCC issued a new  
9 notice of proposed rule making, and it is FCC document  
10 03-8, in late January. It is the second periodic  
11 review of DTV, and interestingly, it brings up a lot  
12 of these discussion points about the issues of t.v.  
13 channels electing -- you know, by what date should  
14 t.v. stations elect which channel they are going to  
15 give us so that other people know which channels they  
16 can start planning to group to.

17 That date had originally been set and then  
18 suspended with no new date set. They are now talking  
19 out in the 2005, the year 2005 to reset that date.  
20 There are some issues about cutoff dates on maximizing  
21 coverage.

22 And some further discussion of the

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1 interference issues or parameters between land mobile,  
2 and t.v., and the interference issues between t.v.,  
3 and t.v., and the lower power t.v. So it is  
4 worthwhile reading and I am sure that public safety  
5 would want to make some comments about some of those  
6 issues.

7 Low power t.v. I went back and looked at  
8 what in the 700 reallocation, and in Docket 96-86,  
9 what has been said about the status of low power t.v.

10 As a matter of fact, if you go back to the report and  
11 order on the reallocation of 746 to 806 band, which  
12 was FCC 97-421, which was a report and order on OET  
13 Docket 97-157, as an engineer, I think it is fairly  
14 clear that the intent was to make land mobile a  
15 primary service in this band, just like broadcast  
16 television is a primary service.

17 And that low power t.v. would be secondary  
18 to any primary service in the band, which means that  
19 it would be secondary to land mobile. There is  
20 specific language in here about originally the band  
21 was broadcast only.

22 And they are talking about that they have

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1 to add a footnote to the International  
2 Telecommunications Table of Allocations for Region 2,  
3 which is North and South America, to add mobile  
4 services to the table, and to make those mobile  
5 services primary, which they are in the United States  
6 and Mexico now.

7 It says that in addition that low power  
8 t.v. and t.v. translator operations will not be  
9 required to alter or cease operations until they  
10 actually cause interference, to a new DTV service or  
11 to any primary services operating in the 746 to 806  
12 band.

13 As an engineer, to me that says -- I would  
14 assume that land mobile operations are a primary  
15 service, and that low power t.v. would have to cease  
16 operations.

17 You know, I would assume that they would  
18 probably need some legal consultation on that, but it  
19 is fairly clear to me that the intent was that low  
20 power t.v. would be secondary.

21 Kurt Knight's issue about what is  
22 happening with low power t.v. still getting licensed,

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1 they are talking about the provision of the Budget Act  
2 which had to do with the -- the reallocation was part  
3 of the Budget Act.

4 The provision of the Budget Act leaves us  
5 no latitude in clearing low power t.v. and t.v.  
6 translator stations from this band at the end of the  
7 DTV transition period.

8 We will permit low power t.v. and t.v.  
9 translators to continue to operate on channels 60 to  
10 69 until the end of the DTV transition period, as long  
11 as they do not cause harmful interference.

12 And later on -- okay. I have got to find  
13 the next paragraph here. Okay. We are retaining the  
14 secondary allocation for low power t.v. and t.v.  
15 translators in the entire band until the end of the  
16 DTV transition period.

17 We will further consider low power t.v.  
18 service in a further proceeding. I think that was  
19 probably the Class A proceeding, where they allowed  
20 Class A in the core spectrum, but not on at least 60  
21 through 69. I can't remember if they allowed Class A  
22 on 51 through 59 or not.

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1           Given their secondary status, we will  
2 continue to authorize low power t.v. and translator  
3 service, which to me means continue to license, until  
4 the end of DTV transition period. So the FCC will  
5 continue to license them.

6           Now what is interesting is in the middle  
7 of this that the FCC has changed how broadcast  
8 licenses expire. They went from a 5 year to an 8 year  
9 cycle, and between '95 and '98, they transitioned all  
10 of them.

11           So like in Arizona, all t.v. licenses in  
12 the State of Arizona expire sometime in 2006. So it  
13 is like every 3 months so many. So even though they  
14 are authorized now, they are still under that -- you  
15 know, they are under shortened licenses, and they all  
16 expire in 2006.

17           And in other States there is different  
18 time frames, but most of the new ones that I have seen  
19 authorized over the last two years all expire in the  
20 2006-2007 time frame.

21           So they aren't authorized for a long  
22 period of time. Okay. I think that most of this is

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1 about other topics. So to me, in reading back through  
2 the original reallocation docket, as an engineer it  
3 was clear that they are secondary. It is clear that  
4 they are going to continue to license them until the  
5 end of the DTV transition period, which is that  
6 nebulous date that Betty and I keep trying to  
7 interpret, that 309 or whatever paragraph it is.

8 So I don't know if that helps clear up the  
9 issue, but they are going to remain on the air until  
10 they cause interference, and it is clear that it says  
11 that when and if they cause interference, they are to  
12 modify their operations, or cease operations, if they  
13 interfere with a primary service.

14 So I can send anybody who wants it, the  
15 docket or -- well, it is about 20 paragraphs out of  
16 there that refer to this. That's all I had to say on  
17 that topic.

18 CHAIRMAN DEMPSEY: Thank you.

19 MR. WILHELM: How about the freeze on new  
20 high power?

21 MR. EIRMAN: Yes, there has -- I mean,  
22 there has been a freeze, and as a matter of fact, I

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1 guess people -- well, I mean, there has been a freeze  
2 on new high power stations, and any ones that had  
3 applications in, I guess are never really going to get  
4 on the air on 60 through 69.

5 I mean, they were a bunch of mutually  
6 exclusive applications, and I know that I keep looking  
7 at the one in New York out near Buffalo.

8 PARTICIPANT: Arcade.

9 MR. EIRMAN: Yes, Arcade has got 10  
10 mutually exclusive applications, and there are circles  
11 from this big to this big. And they are never going  
12 to get on the air, and there are several -- and when I  
13 do my analysis, I always ignore them, because I was  
14 told that they would never get on the air.

15 There is a freeze on new applications and  
16 there is something that just expired that if they  
17 didn't file for maximization -- on 60 through 69, if  
18 they had not filed for maximization by sometime back  
19 in 2002, they couldn't maximize on 60 through 69  
20 anymore after January 2nd of this year.

21 And I have that somewhere in here, but  
22 there is basically, except for low power t.v., there

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1 should not be any more new stations going on to 60 to  
2 69. As a matter of fact, when I sit down and do the  
3 analysis, I think -- well, what was the number that we  
4 came up with, Al? Something like 5 percent of the  
5 stations are blocking 50 percent of the population  
6 access to 700 megahertz band or something.

7 MR. ITTNER: Yes. Al Ittner, Motorola. I  
8 think you came up with the number, but 5 percent of  
9 the stations are blocking public safety from serving  
10 54 percent of the population if you do it on a county  
11 by county basis.

12 MR. EIRMAN: Yes, and I don't know if you  
13 have seen the big green and red map that I did with  
14 APCO, and it was at some of the regional APCO  
15 meetings, where most of the U.S. is green, and parts  
16 that are red, well, I overlaid that on the counties  
17 that intersected, and then some of the population on  
18 those counties. And it is 54 percent of the U.S.  
19 population.

20 MR. ITTNER: Yes, the issue is simple. If  
21 you are looking at the red-green, it looks like there  
22 is a lot of green there, but the population is really

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1 centered in the red areas. So that kind of look in  
2 that overlay --

3 MR. EIRMAN: I looked at that again in the  
4 last week, and I think there are 70 some stations that  
5 affect public safety, and I think if we cleared 44 of  
6 them, public safety would have access to at least 12  
7 megahertz of the 24 megahertz nationwide.

8 MR. BUCHANON: I would suggest that we  
9 feed that information back to the steering committee  
10 and ask that that be put into the report to the FCC so  
11 that -- and there may not be anything that the FCC can  
12 do under whatever all the laws are, but at least it  
13 ought to be pointed out, because that is some  
14 significant figures.

15 That if you can just figure out a way to  
16 get rid of 5 percent of the stations out there that  
17 you can clear this band and start using it.

18 MR. EIRMAN: Early election of which  
19 channels or stations are going to give us so they can  
20 move. And freezing maximization so that --

21 MR. BUCHANON: And I think there is some  
22 pending dockets for some of that stuff, too.

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1 MR. EIRMAN: Well, like I said, the second  
2 periodic review is out, and a lot of those issues are  
3 brought up in the second periodic review. So it can  
4 be addressed there as well.

5 MR. BUCHANON: Yes, I think it worth  
6 bringing up and maybe we can get that addressed.

7 MR. SPEIDEL: Bob Speidel with MACOM. One  
8 thing that we should point out, David, that as part of  
9 that proceeding, and the second review, I think it is  
10 in paragraphs 30 and following, there is a lot of  
11 questions asked concerning the interpretation of -- I  
12 think it is 309(j), or in other words, the definition  
13 of the exception so to speak.

14 And there are some things, and I think  
15 some very important things, that you might want to go  
16 in and comment on. Like, yeah, count people that have  
17 got it on their cable and all this kind of stuff.

18 So I think if you read it very closely,  
19 there is some things and some comments that can be  
20 made to at least minimize the impact of the exception  
21 rule.

22 MR. EIRMAN: Yes, that is. There is a

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1 long discussion or a long series of questions in there  
2 about the loophole, the 85 percent loophole, and how  
3 it is defined, because we went back and reread it this  
4 last week, and it is like as clear as mud.

5 And there is like three conditions. One  
6 is that there is no converters available --

7 MR. BUCHANON: Generally available.

8 MR. EIRMAN: Generally available within  
9 the market. And then the question is, the first thing  
10 is, what defines the market. You know, is it  
11 Nielsen's DMA, or is it some FCC definition or  
12 whatever.

13 And then if the four major broadcasters in  
14 the market don't have one of their stations on the air  
15 operating in digital, well, what if there is -- well,  
16 then there is the question of which of the four  
17 majors.

18 It does not define it, and is it  
19 nationwide four majors, or the four majors in that  
20 market. And what if Fox has two stations in that  
21 area. Is only one of them going to be on digital, or  
22 are both of them going to be on digital.

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1 I mean, there is a whole bunch of -- the  
2 nuances of what that language really means, and I  
3 guess we are inviting you to comment on the public  
4 safety view of it.

5 CHAIRMAN DEMPSEY: We are trying to look  
6 for that map actually.

7 MR. EIRMAN: The red-green map?

8 CHAIRMAN DEMPSEY: The red-green map.

9 MR. EIRMAN: I'll find it. I am asleep at  
10 my computer.

11 (Brief Pause.)

12 MR. EIRMAN: Oh, there it is exactly.  
13 Like I said, those little blocks, those are counties  
14 that the red circles intersect, and that represents 54  
15 percent of the population.

16 CHAIRMAN DEMPSEY: And if you look at it,  
17 it is in every population center of the United States.

18 MR. EIRMAN: This is where there is no  
19 spectrum available.

20 CHAIRMAN DEMPSEY: Right.

21 MR. EIRMAN: In the green part there is at  
22 least 12 megahertz available of the 24, and the red is

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1 where there is none of the 24 available. And like  
2 Dallas, you clear one station, and Dallas has opened  
3 up, and Southern Wisconsin, there is one station, and  
4 New York City, you clear 10 stations.

5 And Los Angeles -- you know, well, like I  
6 said, I think it is down in the range of 40 to 50  
7 stations would make most of those, if not all of those  
8 red circles, go away. And this does not include the  
9 Canadian, and I don't think I have one here with the  
10 Canadian, the Canadian or Mexican.

11 With the Mexican, there is some right at  
12 the Gulf, and there is about four stations in Mexico,  
13 and existing stations, there is only about seven along  
14 the Canadian border, and if you include the proposed  
15 DPV, and there is about 30 something.

16 And if you include the low power DTV,  
17 there is about --

18 MR. ITTNER: Three thousand.

19 MR. ROOT: One thing that we did a little  
20 research on and I don't see where you have requested  
21 any, is -- oh, I'm sorry, Don Root, Region 6. One  
22 thing that the State of California did some research

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1 on was that there appears to be a fair amount of  
2 activity also in Mexico that is either analog  
3 allocated or analog proposed on the air south of the  
4 border that might be impacting the border zones on the  
5 south fence that is not reflected in any of the  
6 presentations that we have seen so far.

7 MR. EIRMAN: On the international  
8 agreement between the U.S. and Mexico, there is a  
9 limited number of stations. And there are probably  
10 about 5 or 6 that affects the Southern California and  
11 Arizona border somehow.

12 MR. ROOT: Agreed.

13 MR. EIRMAN: You're right.

14 MR. ROOT: Unofficially.

15 MR. EIRMAN: I don't think their low power  
16 t.v. stations and translators show up in that list,  
17 and yes, if you go down and look at the t.v. listings  
18 city by city in Mexico, there are a lot of stations in  
19 this area that show up.

20 MR. ROOT: Also, I am a little concerned  
21 with the way the chicken and the egg aspect of the low  
22 power t.v., and from the public relations standpoint

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1 of you have got an LPTV on 64 sitting in some area  
2 that is otherwise pristine and available for lighting  
3 up on, and along comes the big, bad county government,  
4 who sits there and puts their new radio system in.

5 And then all of a sudden it is the war of  
6 government versus the poor community television  
7 station, et cetera, and I think that everyone needs to  
8 be aware of the fact that we are setting ourselves up  
9 for some interesting press there.

10 MR. EIRMAN: I don't have any answers to  
11 the political issue of how do you get the low power  
12 t.v. station to turn off.

13 CHAIRMAN DEMPSEY: Okay. Sean will give  
14 his presentation and then we will go into the old  
15 business and new business stuff, and close it out.

16 MR. O'HARA: None of the Denver people are  
17 here today, but as you heard in the database, the  
18 precordination database is done, and it is finally --  
19 the (inaudible) have been loaded into it.

20 At the last conference I talked a little  
21 bit about how those full audits are being developed,  
22 and there is a lot of talk about -- and before we even

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1 started developing those, you know, and what kind of  
2 requirements, and what kind of frame work that we  
3 wanted to use for those.

4 Now, they are done and I wanted to just  
5 kind of go over the results, and explain how they were  
6 doing, and I get that there is a lot of confusion, and  
7 when people see some of the results, there are some  
8 things that came out for them that are confusing.

9 And hopefully once I go through this, it  
10 will have cleared up some of those issues, and maybe  
11 it won't. There is also some questions of the orphan  
12 channels, and supportable technology, and those kinds  
13 of things, and I want to make sure that everyone  
14 understands what they can do with this full spectrum  
15 just the way that it is now.

16 This pool allotment, and for those of you  
17 who don't know, this pool allotment is by county, and  
18 each county pool allotment is a contiguous 25  
19 kilohertz block. It was decided by us really to go  
20 with the 25 kilohertz block.

21 And there was also a meeting of the  
22 National Plan that kind of went along with the same

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1 thing, and I think it is similar to the plan in the 25  
2 kilohertz block.

3 That was pretty much to make sure that  
4 there was no technology that was left out or  
5 neglected, even though there wasn't currently a 25  
6 kilohertz spectrum technology available here.

7 And each one of the pool allotments  
8 maintains at least 250 kilohertz separation from every  
9 other allotment within that county, and that was to  
10 keep the antenna system losses down and the costs down  
11 on the antenna systems.

12 MR. DEVINE: Steve Devine, State of  
13 Missouri. And this is a discussion that we have had, a  
14 nd the 250 kilohertz separation is assuming to some  
15 degree that in each county pool allotment you have --  
16 but when you talk about combiner spacing, you are  
17 talking about having one best case scenario if you  
18 have one combiner in the county.

19 MR. O'HARA: Actually, you will see that  
20 it depends. It actually supports a lot of different  
21 technology.

22 MR. DEVINE: But on the surface, on the

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1 surface, if you had more than one separate system  
2 completely operating independent of each other, you  
3 wouldn't necessarily have to have that spacing for  
4 every channel if they were geographically separated  
5 from each other.

6 And that is assuming that you are talking  
7 about one combiner to preserve that spacing.

8 MR. O'HARA: Right, but when you see that  
9 you get into multi-site, multicasting, you still need  
10 that in order to support for each one of those  
11 individual sites.

12 And that was also a decision that was made  
13 by committee. As we were going into this, our target  
14 was to make sure that each county got a minimum of  
15 five channels, five of these blocks; three for voice  
16 and one for data. Did I say 5 or 4?

17 Well, there was a minimum of four  
18 targeted. We got a minimum of five everywhere, except  
19 for Puerto Rico and the Virgin Islands, where there  
20 was a tremendous amount of constraints.

21 It turns out that there is 83 counties in  
22 the Puerto Rico-Virgin Islands area, in an area that

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1 is about the size of three New York counties.  
2 Basically everybody was in the space of one  
3 interference contour.

4 So it was very difficult to get that done,  
5 and we will see a picture of that later. There is  
6 going to be a lot of pictures. It is very hard to  
7 kind of describe in words what the stuff that was done  
8 on this, and so I am going to have a lot of pictures,  
9 because I think it tells the picture a lot better.

10 On the 700 megahertz regions, these  
11 allotments were actually done on the county level, and  
12 the actual regional boundaries played no factor at all  
13 in the allotment of these frequencies. This was done  
14 uniformly and on a national level, and simultaneously  
15 so that it was fair and equitable no matter where you  
16 were.

17 It was not necessarily trying to get to  
18 where every reading had the same number of channels or  
19 anything like that. It was trying to get the most use  
20 out of the spectrum, and to push all the spectrum and  
21 pack the most spectrum in the areas that needed it the  
22 most. Overall results.

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1           This is whole type of packing process is a  
2 kind of a frequency assignment problem. These are  
3 very complex types of problems. There really is no  
4 computable solution to these. They come from a class  
5 of problems called NP complete.

6           And basically there is just so many  
7 possible combinations to the problem that no computer  
8 could -- you would get it forever and really there is  
9 no way to do it and get a solution.

10           There is only good methods to these types  
11 of problems. And we used the hybrid of the typical  
12 good methods that are proposed in these. One example  
13 of this kind of problem was when the FCC did their  
14 digital television allotment plan.

15           They used a simulated annealing type  
16 approach, which is similar to the kind of approach  
17 that we use, and it is a way to kind of go through the  
18 search phase and come up with an optimal solution.

19           And the solution that we used also had  
20 kind of like a forward and backward search refinement  
21 algorithm that was built into it that kind of -- to  
22 tweak it.

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1                   When you look at the results, you have got  
2 to realize that this packing is dependent upon an  
3 awful lot of variables, and it is very hard to  
4 visualize every decision made by the program, because  
5 at each step it bases its decision based upon both  
6 individual and national capacity needs.

7                   It kind of looks at everything at once.  
8 Individual and global terrain which varied  
9 considerably across the country, and past and future  
10 assignments kind of simultaneously. So there is a lot  
11 of stuff going on and it is very hard to visualize.

12                   You can only kind of take a slice through  
13 one of the spaces and say how does this look as  
14 compared to the capacity or how does this look in  
15 terms of the terrain, and use characteristics, and  
16 look at it like that.

17                   There was hard constraints used in this,  
18 and by that I mean there was interference contour  
19 interceptions, and if they intersected, assignments  
20 were not allowed. There was combiner system  
21 separations imposed, and those are not allowed to be  
22 broken.

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1           There was adjacent panel issues, and those  
2 are not allowed to be broken. The program itself is  
3 made thought that it can operate with soft constraints  
4 or fuzzy logic, so that if there was more detailed  
5 information available, you could actually tailor the  
6 results to the individual counties.

7           For example, if a county or region, and  
8 let's say San Bernadino County, David, and it needed  
9 more channels, and you could live with 125 kilohertz  
10 combiner spacing, and he was willing to accept a  
11 certain percentage of coverage area with increased  
12 interference, the program can actually do that, and  
13 tailor his results to his region, while leaving  
14 everybody else's parameters intact, or massaging those  
15 to meet everyone else's needs.

16           That is a very powerful approach and that  
17 is going to make this kind of useful perhaps in terms  
18 of future repacking of the spectrum if that is decided  
19 to be done.

20           Another thing that this could do as we go  
21 into the future is that once we get technology  
22 specific, that it adds the ability to actually

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1 integrate the various technology wave forms and the  
2 various technology filter characteristics to tailor  
3 individual county to county interference based upon  
4 the technologies that they are using.

5 In other words -- and particularly the  
6 adjacent channel contours would be adjusted based upon  
7 the technologies that each county was using. And the  
8 program has the capability to do that. It already has  
9 a wide range of IF filters and transmitter power  
10 spectral densities built into it.

11 This is a color-coded map of the  
12 Continental U.S., and the results in terms of channel  
13 allotments. It is a pretty map, but it really doesn't  
14 say a whole lot, and it kind of makes it look like the  
15 people on the East Coast didn't get as many pool  
16 allotments or something as the people on the West  
17 Coast.

18 But actually on a channel per square mile  
19 kind of basis, there is probably a whole lot more on  
20 the East Coast. This really reflects the size of the  
21 county more than anything else.

22 And if we zoom in on some individual

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1 areas, it probably is a little more telling. The  
2 Southern California area, this one is for Dave  
3 Buchanon. This is again the color-coded number of  
4 allotments that were packed out of the spectrum, and  
5 you could see if you are familiar with the area that  
6 they generally follow the population characteristics  
7 capacity needs of those counties.

8 Southern California is very -- has very  
9 high capacity needs, and so does Arizona, not too far  
10 across from the border from them. A similar map for  
11 the New York -- the New York Metropolitan Area and  
12 East Coast, and I might have a more detailed map on  
13 that later.

14 This would be the Detroit and Chicago  
15 markets. A byproduct of this that I will mention, and  
16 it is kind of important going into the future, is that  
17 in general if you were on the border of the United  
18 States, or if you didn't have anybody to one side of  
19 you or the other, you tended to get a whole lot more  
20 pool allotments, because it found more available  
21 spectrum to give you.

22 And in general it is going to try to give

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1 the populated areas what they need first, and once  
2 they have exhausted the amount of spectrum that they  
3 can get on the combiner spacings and all of that, then  
4 it kind of doles the spectrum out until it is all  
5 gone.

6 In the border areas, they tend get a lot  
7 more as I mentioned, and the reason that is good is  
8 because they not only get a lot more, but it is spread  
9 out throughout the whole band.

10 The reason that is good is because all the  
11 border negotiations with Canada and Mexico haven't  
12 been developed yet. So this kind of pool allotment  
13 plan, no matter how those negotiations come out, and  
14 no matter how they decide to split the spectrum, the  
15 people in the border areas already have a little extra  
16 to lose.

17 And however that is partitioned out, they  
18 are not going to lose more of -- you know, one county  
19 is not going to lose all of its spectrum, and the next  
20 county is only going to lose like one channel.

21 It is going to be pretty much evenly  
22 distributed amongst everything because of the way that

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1 it is distributed across the band. This is the  
2 Florida area.

3 And this is the Puerto Rico area, which  
4 looks very cold, and I know that it is not cold in  
5 Puerto Rico, but again this looks like a really big  
6 area when you look at it on the map.

7 But again if you put this over New York  
8 State, I mean, the State would literally -- it would  
9 certainly more than take up this whole page here, and  
10 that would follow in the space of about 2-1/2 to 3  
11 counties.

12 Okay. Some technology considerations. We  
13 have got these 25 kilohertz blocks, and we heard about  
14 this orphan channel problem, which is a real issue.  
15 Let's kind of look at how these -- how different  
16 technologies and different system designs can be  
17 supported by these blocks.

18 Let's say we had the typical -- I would  
19 say the typical kind of county, with 1,200 square  
20 miles and we decided to cover it with five sites,  
21 various-sized sites, between 5 and 8 miles, and we  
22 have our channel pool of 18 to 25 kilohertz channels.

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1

2

If we had to do a multicast system, you can get seven 12-1/2s per site, or you could get 14 6-1/4s per site by either going multicast FDMA, or TDMA, with the one per 6-1/4 spectral efficiency.

6

7

If you went with a single zone simulcast, you could use 18 25s per site, or you could use 18 12-1/2s per site, with the other 18 12-1/2s being the orphans.

9

10

Or you could go with a two zone simulcast, using 18 12-1/2s at each site also.

11

12

And a two zone simulcast is a little bit easier to set up, particularly over a large county.

13

14

There is no doubt about that. If you decided to go with the more cellular type of approach, effectively say if you were using a seven cell cluster, you are going to have seven sites over that county.

15

16

17

18

Here we have got 22, but they are reused in clumps of seven. For a multi-cast system, for those 18, you would get 5 12-1/2s per site, and 10 6-1/4s per site. If you have three clusters, you could also go with a three system simulcast or a three-zone

19

20

21

22

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1 simulcast system, and get 12 12-1/2 channels per site.

2 We can go on and on forever, but let's  
3 kind of look at how this -- and using those same  
4 things, these are the different spectrum plans that  
5 you could use to slice up that spectrum, and for 6-1/2  
6 FDMA multicast, basically you get 14 to 15 voice paths  
7 per site, and you get 72 total channels, or 72 total  
8 voice paths.

9 Now, remember that 72 is also the number  
10 of -- the total number of 6-1/4 equivalents that that  
11 county got. And so there is no spectral efficiency  
12 wasted by going this route. If you wanted to go into  
13 12-1/2 kilohertz technologies, for an FDMA system  
14 multicast, you have got the 7 to 8 channels per site,  
15 and you are going to get 36 total voice paths.

16 If that was a TDMA system, two slot TDMA  
17 system, you would have 72 total voice paths. Again,  
18 full spectral efficiency, as soon as you moved to a  
19 technology that has full spectral efficiency. You are  
20 not going to get that without it.

21 If you went into a 6-1/4 FDMA cellular,  
22 again your channels per site goes down slightly from

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1 the different designs, but you are still going to get  
2 your 72 voice paths for that county.

3 For the cellular 12-1/2 type system, the  
4 story is going to be the same. You have got 36 voice  
5 paths, or 72 voice paths if you decided to use a two  
6 slot TDMA in there.

7 And one thing that I will note, and this  
8 is the thing that I said to Steve earlier, that 250  
9 kilohertz combiner separation, as you split up all  
10 these technologies, that also allows for these kinds  
11 of combiner separations.

12 The 6-1/4 FDMA multicast can be set up so  
13 that nothing is less than 225 kilohertz per site. For  
14 the 12-1/2 kilohertz, now your combiner separation is  
15 going to be set up so it is no less than 500 kilohertz  
16 per site.

17 And 225 kilohertz again, and for this  
18 configuration, you can keep your combiner separations  
19 at one megahertz, and still get the full use of all of  
20 these channels.

21 A single zone simulcast system for the  
22 whole county, your spectrum plan would look something

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1 like this, and all the channels used at every site.  
2 For an FDMA system, you would only get 18 voice paths.

3 This is 700 megahertz, and you are not going to be  
4 using that kind of technology.

5 So at a very minimum, you are going to be  
6 using two slot, or possibly even four slot technology  
7 in there, and again if you use four slot, full  
8 spectral efficiency is going to result.

9 And this is all the rest of the multi-zone  
10 simulcast configurations that you can come up with.  
11 There is a two zone, and there is a three zone, and  
12 they all kind of tell the same story.

13 I will jump to the next table, and  
14 basically if you look at this table here, everything  
15 on the left, every single one of those technologies is  
16 supported by that full spectrum that that county got.

17 And that runs anywhere from 6-1/4 FDMA  
18 multicast all the way to 25 kilohertz TDMA three zone  
19 simulcast.

20 The two columns on the right, the second to the right  
21 is whether full spectral efficiency is achieved, and  
22 there is no surprise there. You are going to get full

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1 spectrum efficiency out of that spectrum every time  
2 that you use the technology that has got full spectrum  
3 efficiency.

4 You are not losing anything by going to  
5 this 25 kilohertz blocking, no matter what technology  
6 you choose. And one of the important things in the  
7 public safety system, because of the wide area  
8 loading, is that you want to maintain a high number of  
9 channels per site if you can.

10 So picking a number of voice paths per  
11 site of greater than 12, you still see that a lot of  
12 these technologies also support that under these kinds  
13 of spectral plans. And on the left there you see the  
14 Project 25 runs down there.

15 And I put a dropped open sky where there  
16 is currently available technology to support some of  
17 that. There is tetra and tetra is not available in  
18 this country, but it is a standard that may be  
19 replicated or we may see a similar type technology.  
20 All these technologies are supported under that 25  
21 kilohertz block plan.

22 The way that the capacity was done I

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1 wanted to detail in the last meeting, and I won't do  
2 that more here, but this is the final capacity model,  
3 which basically said that the number of police, fire,  
4 EMS, and local government personnel is a function of  
5 both population and population density.

6 And these were the curves that capacity  
7 model followed, and basically if you read in the very  
8 rural area, what you see is that the most number of  
9 people in public safety, or the first responders in  
10 the rural area, are fire people; and then local  
11 government, and then EMS, and then police.

12 And the reason for that is that your fire  
13 and EMS services are very heavily volunteer in the  
14 local areas, or in the rural areas. As you get to the  
15 more urban areas, by far the number of police is the  
16 highest, followed very closely by fire and local  
17 government, with EMS at the bottom.

18 So basically you see a shift in the  
19 distribution of public safety personnel as you go from  
20 rural to urban, and that is reflected in the model  
21 that was used there.

22 But it was all dependent on population in

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1 the end. As you go to a more urban area and a place  
2 where there is more people, there is more fire, and  
3 there is more EMS, and there is more first responder  
4 and government services. So you see those trends  
5 there.

6 The model was a function of a lot of  
7 things as I said, including terrain, but if you took a  
8 slice and looked at this in terms of just the number  
9 of pool allotments, versus what the capacity model  
10 targeted or kind of tried to shape the thing to, what  
11 you see in black there is the distribution of capacity  
12 from the capacity model.

13 And the blue part that you see there is  
14 the number of pool allotments that were given,  
15 averaged out to remove some of the noise. You can see  
16 in general that it follows the shape of the capacity  
17 model very well.

18 The only reason that it flattens out is  
19 because we capped the limit of the minimum number of  
20 channels that were going to be allotted for each  
21 county, and that is why you see the flat line there.  
22 This ought to wake a couple of people up.

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1                   What I did was I made a table of the top -  
2                   - when we did the capacity modeling, I looked at the  
3                   top 30 markets in the country that had the highest  
4                   need for capacity, and I just thought that I would  
5                   list them here, because a lot of people in this room  
6                   end up coming from these counties.

7                   The first point that I will make is that  
8                   if you took the top 10 counties most in need of  
9                   spectrum in the country, five of them are in Dave  
10                  Buchanon's region.

11                  CHAIRMAN    DEMPSEY:            What    made    the  
12                  determination of the spectral needs in each county?  
13                  How did you determine, for instance, what New York  
14                  County needed, and Suffolk County, and Kings County,  
15                  versus --

16                  MR.    O'HARA:            That is based upon the  
17                  capacity models, all the capacity models, which were  
18                  based upon PSWAC and they are based upon population,  
19                  and based upon all those factors.

20                  The reason that New York is not higher  
21                  represented here is that New York is split into five  
22                  boroughs, and they are each treated individually.

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1 L.A., by far, had more than double the capacity of the  
2 number two person, which was Maricopa County, Arizona;  
3 followed by Cook County, where Chicago is.

4 There is a couple of Texas, and there are  
5 a couple from Florida. I mean, the country is pretty  
6 well represented. King County is in the top 20. I  
7 don't think it is great to be on this list.

8 I mean, these are the people that needed  
9 the spectrum most, and these are the people that the  
10 model tried the hardest to push the spectrum to, these  
11 and everybody.

12 PARTICIPANT: Did you do all the  
13 surrounding counties of New York?

14 MR. O'HARA: I did everybody.

15 (Question off microphone.)

16 MR. O'HARA: I guess I am not sure about  
17 your question. Could you come to the mike?

18 PARTICIPANT: Emil Vogel. My question is  
19 if you took the Metro New York area and you got  
20 Suffolk and Nassau, but I don't see Westchester, and I  
21 don't see Borgan, and I don't see Hudson County and  
22 all of those areas that surround the Metro New York

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1 area, which are made up of individual departments, the  
2 way the government structure is.

3 And what I was trying to find out is how  
4 did you account for them? Did you do it by figuring  
5 that they would have to lump together in order to  
6 maximize efficiency?

7 MR. O'HARA: Well, number one, we did  
8 everybody. I just decided to pick the top 30 because  
9 they were visible. But all the people that you  
10 mentioned are in the top 50 or the top 100.

11 PARTICIPANT: No question.

12 MR. O'HARA: For example, if you look over  
13 here, this is the top 100.

14 MR. VOGEL: On each of those, you are  
15 talking about a unified statewide or county-wide  
16 system, which does not lend itself to the political  
17 structures.

18 MR. O'HARA: No. No, I didn't -- no,  
19 that's no. These have to be allotted by county  
20 because there is no applications allotted by agency.  
21 These are county pool lots.

22 MR. VOGEL: Thank you. So all I am saying

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1 is that skews a little bit what we are seeing here,  
2 because unfortunately we are looking at a lot of  
3 conventional type systems, and not all the massive  
4 trunk type systems when you deal with these  
5 organizations.

6 They have been dying because they can't  
7 get any spectrum -- they are outside -- because the  
8 big cities have grabbed it all. But they are still  
9 there.

10 MR. O'HARA: Right. Well, they are  
11 allotted by county and then the agencies within the  
12 county are going to have to provide for the spectrum  
13 as decided by the individual regional planning  
14 committees.

15 But what I will say, Emil, is that the  
16 capacity models were used -- they came out of PSWAC  
17 and those used the multi-agency model that you were  
18 talking about there. That model is heavily derived  
19 from the Metropolitan New York area, and so it took  
20 into effect all those individual agencies who had  
21 dealt with the capacity needs.

22 So I am not sure it is that highly skewed,

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1 and in fact it is probably more representative of the  
2 characteristics of urban New York City than it is of  
3 urban L,A., if there is any difference.

4 MR. DEVINE: Steve Devine, State of  
5 Missouri. Sean, in looking at the sort, I have got a  
6 question, and the reason I am asking it in this form  
7 is that I am not really quite sure why it ended up the  
8 way it was.

9 But in St. Louis County, I have got about  
10 1.2 million people, and it was allotted 20 channels,  
11 and in Boone County, I have got about 200,000 and it  
12 was allotted 20 channels.

13 Is that type of -- at least on the surface  
14 and consistency, is that due to those hard choices in  
15 combiner spacing? Because if that is the case, then  
16 that is why I felt that I have had to tweak some of  
17 those because that capacity -- forget about whether we  
18 have orphan channels or not.

19 Even if we use every one of them, I am  
20 still going to have capacity issues. It has got 90  
21 different municipalities in it, and that is what leads  
22 me to think that I might be talking about more than

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1 one combiner.

2 But the county that is in rural Missouri,  
3 geographically they are both about the same, terrain-  
4 wise. So that is not one of the parameters. I think  
5 it is the combiner spacing that in some areas which  
6 limits the number of channels, and I am curious to see  
7 the number of channels that the Maricopa Counties and  
8 Los Angeles Counties -- I mean, it is a maximum.

9 If that is a hard choice, then there is a  
10 limit to the number of channels you can put, or you  
11 are going to break that 250 kilohertz spacing.

12 MR. O'HARA: That is a question that not  
13 only you had, but Kevin Kearns had, and I never got a  
14 chance to talk to you about it, but I sent you a  
15 presentation, and I think that you understand where I  
16 was going with it.

17 MR. KEARNS: I kind of did.

18 MR. O'HARA: And I understand that the  
19 structure was very troubled about this yesterday. The  
20 reason that you see that -- I mean, again, this is a  
21 very multi-variable model, and it is very hard to see  
22 why decisions are made.

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1           There is two reasons why you end up with  
2 getting a lot of channels in areas that have low  
3 population, and actually I am going to go into them  
4 near the end of this. And I will just mention them  
5 quickly right now.

6           One is that they happen to be in an area  
7 that is a very low capacity need area, and it also  
8 happens to be in an area that is not pinched by two  
9 population or more population centers.

10           So when the population centers have as  
11 many channels as they could get, the leftover channels  
12 were just assigned out until they were done. The  
13 second thing that you will see that happens in that is  
14 there is a terrain isolation that happens with a  
15 county, and it virtually does not affect anybody else,  
16 but let's say I can't give anymore to King County, but  
17 I can keep shuffling them off to this county that is  
18 isolated on four sides by mountains forever.

19           And the county that was the lesser  
20 populated county is basically a pretty substantially  
21 populated area and surrounded by nothing. So there  
22 was really no obstructions around it to cause any more

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1 additional channels than the minimum, and therefore  
2 there were channels available.

3 And once again though, there could have  
4 been more channels available for St. Louis County if  
5 that combiner spacing was soft, as compared to hard,  
6 because that is the capacity issue, and it is that  
7 restriction that causes me to look at that and say  
8 that that is not -- and that is where they are going  
9 to build systems. That is where we are going to need  
10 the channels. It is not going to be out in the middle  
11 of nowhere.

12 MR. DEVINE: Right. With the combiner  
13 spacing as it is, nobody could ever get any more than  
14 24 of these 25 kilohertz channels.

15 MR. O'HARA: Right.

16 MR. DEVINE: There is no other way to do  
17 the spectrum.

18 MR. O'HARA: Right. But we are assuming  
19 that there is one combiner in the county, and I have  
20 got 90 cities that can't even agree that it is  
21 Thursday, let alone whether they are going to build a  
22 system again. So because of that, I have to assume

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1 that I am going to have more than one combiner, which  
2 would -- and, you know, not being one system.

3 MR. DEVINE: But as you see though, by  
4 using the combiner spacing like that, no matter what  
5 technology you choose, the combiner spacing is  
6 reasonable also.

7 MR. O'HARA: Right. And I think now --  
8 and again this decision was made in committee, but the  
9 decision was made to not impose any technology or  
10 design restrictions on any of the pool allotments, and  
11 that is the reason that it was left at 250 kilohertz.

12 If people do in fact need more spectrum,  
13 if I was allowed to pack these at very low models, and  
14 let's say 125 kilohertz, you might see double the pool  
15 on this, and you might even see triple the pool on it.

16 MR. DEVINE: And I can understand that in  
17 order to do it, you have to do it to accommodate all  
18 the technologies, which you could describe as a very  
19 conservative approach, assuming that you are going to  
20 have one combiner in the county. That might not  
21 always be the case, but in that particular instance  
22 you have to assume that that is a possibility, and so

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1 I can understand why it ended up that way.

2 MR. O'HARA: This is a plan that had to  
3 generalize on a national basis. It had to generalize  
4 requirements technologies and system designs, and that  
5 is a difficult thing to generalize. I am extremely  
6 proud of the way that we have been able to generalize  
7 frequency reuse in the terrain utilization, and we  
8 will talk about that a little bit, because that has  
9 been very effective.

10 And especially given the fact that we  
11 don't have any site locations or anything to start  
12 with. So we will continue on to that. I talked a  
13 little bit about this at the last NCC meeting.

14 When we were characterizing the  
15 interference reasons that each county would affect, we  
16 selected the transmitter at the highest location  
17 within the county, and we put a reasonably small  
18 antenna, or a reasonably short antenna on top, up to a  
19 hundred feet.

20 And for counties that had -- for very  
21 large counties, what happened is that we picked the  
22 highest location, and we blocked out a large amount of

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1 area, and 125 kilometers here, and then we found the  
2 next highest location, and then we blocked out a lot  
3 of area.

4 And we found the next highest location,  
5 and we used all three of those as sample points. But  
6 in each one of the sample points, what we did is that  
7 we performed a propagation model outward and generated  
8 a detailed interference contour that was actually  
9 based on retracing over the terrain.

10 We generated those for each one of the  
11 contours that represented a county, and then as an  
12 additional protection mechanism, we generated 50  
13 kilometer buffer that exactly followed the county  
14 shape.

15 The reason for that is that not only is  
16 the interference from the county going to kind of be  
17 based on the actual terrain characteristics, but  
18 because you have to maintain a 40 dbu level at a  
19 distance past the county, whatever you did to do that  
20 to your service contour is also going to in some way  
21 shape your interference contour.

22 So we wanted to kind of utilize that, and

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1 also include an interference buffer for site locations  
2 that might be different from the ones that we chose.  
3 Then we basically take a union of those two contours,  
4 and we take the contour that contains the greatest  
5 extent when you consider both of those together.

6 Just as an example, if you look at the way  
7 that San Francisco County's interference contour was  
8 generated, we chose the site location, and then we did  
9 a propagation model, and you see the propagation model  
10 is not a circle by any stretch of the imagination.

11 We generated an interference contour based  
12 on that model, and we generated a buffer contour,  
13 which is the dotted line here. Actually, the dotted  
14 line here is the union of them both.

15 If you overlay that on the terrain, and  
16 this is very difficult to see I guess, but what you  
17 found is that the interference contour from that  
18 pretty much exactly follows the terrain and stops  
19 itself at every one of the valleys around there.

20 So without even knowing any site locations  
21 or any design parameters of that county, we have  
22 generated an interference contour that pretty much

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1 matches the interference contour that you are going to  
2 get, no matter where you place your site within San  
3 Francisco County.

4 And I have looked at hundreds and hundreds  
5 of these and each one of them did a fantastic job of  
6 doing this. Here is another case for Orange County,  
7 and this one had some over water effects that I  
8 thought were interesting.

9 Again, the propagation model, and the  
10 contours that were developed. You see the contours  
11 that come in on the lower left? They are coming in on  
12 the lower left and they are getting shadowed by that  
13 island there.

14 And if you overlay this on the terrain  
15 again, again the valleys that surround that county  
16 completely contain the interference contours for that  
17 county. And by doing this with each one of the  
18 counties, we are actually able to peg the spectrum  
19 based upon the terrain very well.

20 PARTICIPANT: You have 5 percent of the  
21 nation's population there in that zone.

22 MR. O'HARA: We use characteristics. All

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1 I want to say here is that if you took an average of  
2 all the counties across the county, on average they  
3 have 9 pool allotments, and the median is 8, and each  
4 several 700 megahertz general use block was on average  
5 used about 205 times.

6 One of them was reused as many as 260  
7 times across the country. And if you looked at the  
8 areas that were the most difficult, and the areas that  
9 had the most interference issues to worry about, they  
10 fell in the Northeast, predominantly in the Virginia  
11 area and in Puerto Rico by far.

12 And that really has to do more with the  
13 size of the county than anything else. You have a lot  
14 of counties, and an interference contour is an  
15 interference contour. It is going to go out a certain  
16 distance.

17 This is just some reused maps of a channel  
18 block, and this is one of the channel blocks that I  
19 numbered 142. If you look at where it was used -- I  
20 mean, in New York State, this is used 7 or 8 times  
21 within New York State alone.

22 You will see holes in the map where you

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1 say, geeze, couldn't we find another place to put that  
2 channel. Those holes are very important, because by  
3 putting holes in areas, you are able top push the  
4 spectrum to areas that really need it.

5 If that hole is plugged up and there is  
6 probably one less channel, or maybe even five less  
7 channels, for the Philadelphia area. And this is the  
8 adjacent channels of that block.

9 There is some regional examples here now  
10 just to provide a few more examples. This is Region  
11 24, Steve's region, and this is the capacity model  
12 that resulted from Region 24. And if you color code  
13 it, you have hot spots and you have cold spots, and  
14 the model is going to attempt to try to put more  
15 channels into a hot spot, and not worry so much about  
16 the cold spots, except for the minimum channel limit.

17 This is the preallotment pool in that  
18 area, and it is probably a little difficult to read  
19 because the scale is not the same, but the hot spots  
20 in this plot -- where is my mouse -- are here, here,  
21 and here, and the hot spots in this plot are here,  
22 here, and here. The same hot spots.

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1           So if you look at the actual numbers, they  
2 are a whole lot easier to read, but these hot spots  
3 over here -- well, all the channels are kind of being  
4 used up, or a lot of the channels are being used on  
5 either side of it, and it is an area where they are  
6 all starting to come available again, and there is no  
7 other demand for them.

8           PARTICIPANT: Question. How did you the  
9 adjacent counties take that 20 as an example? Do they  
10 benefit at all by the fact that that one county is low  
11 population, or low demand, or low capacity required?  
12 And also what is your observation about water?

13           In other words, there is obviously no  
14 capacity requirement with water, but yet most of the  
15 population centers are adjacent to water. Do they  
16 benefit at all by that?

17           MR. O'HARA: Well, the reason that they  
18 are surrounded by the 20, they are all very low  
19 population centers.

20           PARTICIPANT: How about the hot population  
21 centers?

22           MR. O'HARA: The reason that they have

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1 that number of channels there at all over the minimum  
2 is just because they were available. They are  
3 becoming available again.

4 PARTICIPANT: Maybe I should clarify the  
5 question. Your observation about Los Angeles being  
6 next to water, and you are talking about some  
7 chemistry next to water, and do those counties benefit  
8 by the fact that they are next to water?

9 MR. O'HARA: Oh, yes. I mentioned earlier  
10 that Southern California is very difficult, and had a  
11 very high capacity, and I am fairly confident that  
12 there is no better way operating under these  
13 constraints that you could affect Southern California.

14 But the reason that it probably worked so  
15 well is because there was not anybody interfering in  
16 them from the left, and Mexico, of course, is close  
17 there also. It might have been disastrous, but if  
18 there were other counties to the left of them, maybe  
19 they would not have that much of a capacity either.

20 Washington. This is a question that Kevin  
21 Kearns brought to me, and this is the pool allotment  
22 size for Washington State, for your Region 43. This

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1 is the pool allotment size in numbers, and if you look  
2 here, most of the numbers -- the highest numbers come  
3 down this corridor here, and then there is some high  
4 numbers here, and then there is a 20 here.

5 Let me make a quick note here. I said  
6 earlier that there is -- that the maximum number of  
7 channels that could have been allotted in the pool  
8 with that combiner separation is 24. You can't do  
9 that too many times.

10 There is not many ways to do that, and  
11 there is not many ways to do that at all. So if you  
12 get an assignment that is over 15, you have gotten a  
13 fairly large pool assignment, and particularly if you  
14 get near 18 or 20.

15 These were the capacity model requirements  
16 both on a linear and a log scale, but log kind of  
17 exaggerates the capacity. But basically you see the  
18 corridor, and high capacity here, and the capacity is  
19 waning off here, but there is some capacity need.

20 Actually, let me show these both at the  
21 same time, because that is what I am going to do  
22 anyway. These are the high capacity, and high

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1 capacity over here, and reasonable capacity, and then  
2 these are both lower than here.

3 Kevin's question to me was when you look  
4 at the pool size, this is probably -- this is good.  
5 This is reasonable and this is what you would expect.

6 But why did these guys here get more pool channels  
7 than this guy here.

8 This guy here got plenty as can be  
9 expected. So I looked at that, and again you have to  
10 kind of dig into these things. I had to take a couple  
11 of slices into this thing and try to find out what was  
12 going on, but it very quickly became apparent to me  
13 that if yo look at those two counties, and you look at  
14 where the terrain is in that area, they are completely  
15 isolated from the population centers on the other side  
16 of that mountain range.

17 And that is why they got a lot of  
18 counties, and that is why their pool allotment sizes  
19 were big. Channels became available on the other side  
20 of that ridge because all the interference is isolated  
21 from the other side.

22 And in fact if you look at the

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1 interference contours, they barely creep into the left  
2 side of that ridge, both this one and that one. And  
3 that is the reason why. Now, this other -- this guy  
4 here, you know, if there was no terrain considerations  
5 or anything else, they probably would have gotten a  
6 pool allotment size that is bigger than these.

7 He is not so lucky. He is affected by the  
8 things that go into the Seattle area and those other  
9 things. So if you are going to get a lot in the  
10 Seattle area, he is going to suffer because of that.  
11 Another thing that I noticed is that when you get up  
12 to the Canadian border area, this guy got a  
13 disproportionate amount, too.

14 But again he is probably going to lose in  
15 a conservative estimate one-third of the channels with  
16 the Canadian border agreement, whenever it comes. So  
17 it is good to have a little extra in that case. Amil.

18 The Metropolitan New York area. This is  
19 the capacity model results on a linear scale. This is  
20 kind of the Eastern Seaboard from Boston down through  
21 New Jersey.

22 As you can see the high populated areas,

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1 the high capacity areas, look to be the color that you  
2 would expect them to be. You know, going down through  
3 Connecticut, and through the New York City area, and  
4 Nassau and Suffolk Counties, and then down through New  
5 Jersey.

6 The county sizes are getting very small  
7 there. This is the pool allotment size for that area.

8 Some points that I will make about that. Most things  
9 are in the color that you would kind of expect them to  
10 be.

11 This area here of New Jersey, I would like  
12 to see it a little lighter color frankly, but because  
13 the counties are so small, the spectrum is not  
14 available. But they all have their minimum  
15 allotments, plus then some. They have about -- I  
16 think about 7 to 8 of these 25 a piece, which is about  
17 30 channels a piece.

18 The reasons that you see higher pool sizes  
19 up here -- and this is Sullivan County, and again we  
20 are getting far away from the City, and now the  
21 channels are becoming available again, and nobody  
22 lives on the other side of that.

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1                   These are the kinds of things that you see  
2 over and over, and if you actually look at the  
3 capacity model versus the pool allotments in the  
4 Region 8 specifically, and this is just Region 8, you  
5 can actually see the top curve is the allotment pool,  
6 and the capacity model is the bottom curve.

7                   And you actually see that always stays  
8 above it, and actually follows its shape pretty well.

9                   There is a couple of hots there where we are getting  
10 into Sullivan County, where things are becoming more  
11 available, and there is a flatline because of the  
12 minimum channel restriction.

13                   But I went on and followed the capacity  
14 model as good as it could given the constraints for  
15 that area.

16                   Any questions? No questions. Well, I think it came  
17 out really well. I think that every individual region  
18 is going to have more detailed information, or is  
19 going to be receiving more detailed information than  
20 would have been useful to have as we went through this  
21 process, but it wasn't available.

22                   I think that one of the best things that

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1 you could probably do is periodically incorporate all  
2 of the information that you have, including site  
3 specific information, technology, regional planning,  
4 who is going to use the spectrum, and who is not going  
5 to use the spectrum is very important.

6 And type that spectrum on maybe an every  
7 other year basis or something like that, just to make  
8 sure. A lot of what I see in the NPSTC spectrum is  
9 that the regional planning committees have done a  
10 great job in keeping their spectrum and advertising it  
11 within the region.

12 But you can't keep a spectrum of that type  
13 on a national basis by having 55 different regions  
14 packed into one region. If you want to make sure that  
15 everybody gets the most amount of channels that is  
16 available, you have got to pull out the slack, and you  
17 are going to have to pull it out on a national basis.

18 There is really no other way to do it.

19 One of the things that we found very  
20 quickly is that any county in the Continental United  
21 States, any channel assigned to that county affects  
22 every other county in the United States. There is no

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1 way around it.

2           There is a chain reaction that starts from  
3 the East Coast and goes to the West Coast. So when  
4 you have to deal with a problem on that magnitude that  
5 has such wide impacts, you have got to deal with the  
6 problem on the national level as a whole.

7           You can't just deal with small pockets of  
8 it unless you are lucky enough to have an area that is  
9 completely terrain isolated, and frankly there is no  
10 such area.

11           MR. VOGEL: How about population and you  
12 have an great area and a very, very limited  
13 population, and you have very dense areas of  
14 population, and so I question why you say that you  
15 cannot isolate like the Northeast or the Far West,  
16 because in between you do have a lot of nothing.

17           MR. O'HARA: Well, we could possibly do  
18 that if we knew that there was an area or counties  
19 that never were going to use 700 megahertz, and then  
20 we could certainly block partition that whole thing  
21 off.

22           But that information is not known now, and

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1 in fact if we made that decision right now, that would  
2 be the same as saying you can't have it. So at this  
3 point in time, we can't do that, but in the future.

4 MR. DEVINE: What I would say is that  
5 until you use your 800 that you have not used yet,  
6 then you can't have any of the 700, at least with  
7 regard to the voice channels. We would probably have  
8 to make some kind of a token data allotment.

9 MR. O'HARA: So what kind of maintenance  
10 of this would you think would be appropriate? I mean,  
11 what kind of things can we do to make sure that we are  
12 using the spectrum as efficiently as we can, and we  
13 can maintain that efficient use into the future? I  
14 think that is an important thing to think about.

15 MR. BUCHANON: Steve Buchanon. I think  
16 one of the things, and I know what -- well, for  
17 instance, we didn't use your allotment. The reason is  
18 that we imposed greater constraints on ourselves to  
19 get the need filled there.

20 We didn't go by 250 kilohertz spacing for  
21 combiners other than the people who are going to have  
22 to do it within their geographical area of the agency,

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1 the county, or the city.

2 And in some cases it is going to mean that  
3 they can't have one combiner, and they are going to  
4 have more antennas. So we did a lot of that stuff on  
5 ourselves, and so I think that if some of the regions  
6 are looking at, well, can we get better allotments,  
7 well, take a look at what you can do on that combiner  
8 size, and take a look at other constraints that you  
9 can ease.

10 And then let Sean rerun it if that is  
11 possible. I don't know it takes to rerun it.

12 MR. O'HARA: The more detailed information  
13 that you have, the better you can make the problem. I  
14 mean, again, this whole thing was run in a completely  
15 generalized level.

16 Site locations, technology, everything is  
17 neutral and so we don't exclude that, and once we know  
18 things, every bit of information is actually the same  
19 as having energy. I mean, every little bit of  
20 information that we can have can grow and make more  
21 efficient use of the spectrum, because everything else  
22 is just saying, well, I have to put a little

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1 conservative flab on top of it to make sure that this  
2 is covered.

3 But if we know something then, then we can  
4 certainly get a lot more spectrum out of it.

5 MR. BUCHANON: So if regions feed back to  
6 you, you can rerun some of this?

7 MR. O'HARA: I don't know what kind of  
8 mechanism we would have for that. That is something  
9 that I think should be looked at, and I don't know if  
10 I should do it, but certainly someone should do it,  
11 and just the information collection effort is  
12 something that I don't even want to think about.

13 Collecting and organizing that kind of  
14 data is at least half of the problem.

15 MR. DEVINE: Steve Devine, State of  
16 Missouri. An interesting thing would be if I could  
17 identify in that particular county -- St. Louis  
18 County, for example -- which channels were restricted  
19 from being used there due to the less than 250  
20 kilohertz divider spacing.

21 In other words, is there a way to identify  
22 why there isn't more capacity, because there are

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1 several parameters there as indicating why there, and  
2 is there a way to identify which channels could be  
3 added as long as you are willing to go down to 150.

4 If you wanted to just keep some and just  
5 add some, most of mine are 250 kilohertz spacing, and  
6 then there is some on top that are less than that.

7 MR. O'HARA: No, I could never give you a  
8 specific reason, and the reason is that the program  
9 branches millions and millions of ways, and it is  
10 constant.

11 MR. DEVINE: That would be the kind of  
12 information that would be helpful.

13 MR. O'HARA: (Inaudible) solution, and it  
14 is going to break a branch at any point and go off to  
15 a different point. So you have a very complex --

16 MR. DEVINE: Because when a channel comes  
17 down, and the system decides whether it is going to  
18 put it in there or not, there is several criteria of  
19 which it can remove it from being a possible channel.

20 MR. O'HARA: But it won't look at any of  
21 those individually. It will look at all of them at  
22 once.

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1 MR. DEVINE: Okay. Well, regardless, but  
2 each channel that is not in that 20, there are  
3 different reasons why channels are not in that list of  
4 20.

5 MR. O'HARA: Yes, but again, those regions  
6 are based upon the combiner spacing, and they are also  
7 based upon channel choices that were made for other  
8 counties and their combiner spacing, and so on, and so  
9 on, and so on. Everything is really inexplicably  
10 linked.

11 CHAIRMAN DEMPSEY: Glen.

12 MR. NASH: Glen Nash, with the State of  
13 California, and I think that this is and really  
14 relative to what we found in the 800. I think there  
15 comes a point in time that this is a good starting  
16 place.

17 But there comes a point in time when you  
18 have to acknowledge, okay, we are beyond the starting  
19 place, and you have allocated channels for every  
20 county, because every county has a right to access.

21 But there comes a point in time when you  
22 have a real applicant in-hand who has a real need,

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1       desire, money, and everything else to move forward,  
2       and you can't continue to block off a channel that he  
3       could make use of because, well, that has been  
4       allocated in the adjacent county.

5               And they don't have any plans, and they  
6       don't have any desires, but we have allocated them the  
7       channel and so you can't have it. We just can't do  
8       that. There comes a point in time where you have to  
9       say, okay, the plan was nice to start with, but now it  
10      is today, and it is time to move forward, and we are  
11      going to deviate from the plan because we have good  
12      reason to do it.

13              MR. O'HARA: I absolutely agree with you.  
14      I mean, this is a pool allotment, and not altogether  
15      different from the pool allotment that was done at the  
16      beginning of the NPSTC one, but I bet you that it is  
17      a whole lot more efficient in the way that it was  
18      done.

19              And it follows the population capacity  
20      matrix a whole lot better, and we have already made a  
21      big step up in our starting gate. Now, the pool  
22      allotment holds the spectrum in a place where

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1 applicants can get to it very quickly.

2           Each county has gotten a lot of the  
3 spectrum, and if they need spectrum, they can go get  
4 that spectrum.    The regional planning committee  
5 doesn't have to do any work virtually at all, except  
6 to make sure that however the county designs its  
7 system, the inference contours are not on co-adjacent  
8 basis, and channel basis stay within what they were  
9 when the pool was generated, and that is it.

10           The reason was to get that spectrum out  
11 there and packet it to the populated areas as much as  
12 possible, and do not exclude any technology, and to  
13 make it as easy as possible for the regional planning  
14 committees to get off the ground and get this stuff  
15 out to the actual users.

16           That was the major use for this, and we  
17 wanted to get this spectrum in the hands of the public  
18 safety people as soon as possible, and without having  
19 to do all these huge engineering studies that you have  
20 to do in NPSTC and I am filing applications for New  
21 York today, and it takes a long time to process those  
22 in regional planning where everybody is volunteering.

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1           But this is a pool out there and you have  
2 got to draw a line in the sand and say after one year  
3 or after two years, after three years, those pool  
4 allotments are available for any applicant who wants  
5 to use them and who can use them.

6           And at that point, with all of those  
7 allotments in those rural areas, you could start  
8 pulling around all over the place. Now you are going  
9 to have to start doing your engineering analysis  
10 because you are moving them around.

11           Now you are going to have to make regional  
12 planning modifications, but you are going to have make  
13 regional planning modifications after 1, 2, or 3 years  
14 anyway. I mean, don't you think?

15           If for any region that is going to  
16 actually use this spectrum, they are going to be  
17 making regional plan modifications as soon as one  
18 applicant meets its pool size, or as soon as you let  
19 the pool become available on a general basis.

20           MR. VOGEL: Then you are going to find a  
21 second window if there is some left.

22           MR. O'HARA: Yes. And that is the whole

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1 idea behind this pool. I want to add that I think  
2 there is -- Dave Buchanon has chosen not to use the  
3 pool. Steve Devine has chosen not to use the pool for  
4 various reasons, and they could speak to them.

5 There is a very big danger for a whole lot  
6 of people who decide they are not going to use this  
7 pool, because nobody is going to be able to use this  
8 pool, and I am not kidding about that.

9 Everything is linked. If enough people  
10 decide not to use the pool, then the reuse is just  
11 going to disintegrate. So I think that you really  
12 want to carefully look at the pool, and understand the  
13 complexities and the benefits that it offers before  
14 you make a decision to not use it.

15 If you decide not to use it, then that is  
16 your decision and that's fine. It is not going to  
17 hurt my feelings. But I want to make sure that you  
18 understand the benefits of the pool.

19 And you have to kind of look at things  
20 down at a global level and see that this was done on a  
21 national level, and because of that maybe not  
22 everybody locally has their pool authorized. And that

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1 is a difficult thing to understand.

2 But it does make the best use of the  
3 spectrum, and it does push the spectrum where it is  
4 needed at the most.

5 MR. BUCHANON: I would like to address  
6 that. Dave Buchanon. We had specific reasons for not  
7 using it, and we also had some specific things in our  
8 favor that led us to not use it and not impact our  
9 adjacent regions.

10 It is mainly because the borders with the  
11 adjacent regions are very lightly populated. So where  
12 we needed it, it is very isolated, and where we needed  
13 to make more allotments is isolated from these other  
14 areas.

15 One other thing that we did, and it is  
16 similar to what we had in our 700 plan, I know that a  
17 lot of people went with filing windows, and here it  
18 is, and these are the allotments, and you can go and  
19 do your thing, and then maybe later we will open up  
20 another filing window.

21 We let anybody who can come in and show us  
22 with an engineering study that they can use another

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1 channel in their geographical area, come in and show  
2 it to us, and then we will go and modify the plan.

3 So ours is more of a continuous if you can  
4 show us that you can use it, and that has worked well  
5 over the years at 800 and we think it can continue at  
6 700, and I would suggest that to some of you in place  
7 of filing windows.

8 And that might be what Sean was talking  
9 about of revisiting your plan, instead of making  
10 everybody wait, and wait, and not be able to do  
11 anything. And make them go out and do the work to  
12 show that they can do something.

13 MR. O'HARA: But when you have  
14 applications, you know, say at that the two year point  
15 that people decide to do that. and take the  
16 applications and attach a plan, and pull all the  
17 spectrum into the areas where you needed them.

18 And then wait for whatever amount of time,  
19 and you get more applications, and if you don't have  
20 any more spectrum in the areas that you need it,  
21 repack the spectrum and pull it into the areas that  
22 you need it again.

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1           After a while the spectrum is going to  
2 become exhausted, or it is going to end up in pockets.

3           You know, people are going to be working with  
4 (inaudible) and minor stations, but if that is what  
5 you need to use the spectrum, then that is what you  
6 need to use the spectrum.

7           But by continually pulling the slack on  
8 it, at least people in need are always going to have  
9 it available to them. And there is really no other  
10 way to get it. The City of Philadelphia commented  
11 just on the consensus plan thing, and I completely  
12 agree with this, that instead of moving in this  
13 fashion spectrum down, 50 megahertz and the 100  
14 megahertz band, let's plan on taking the slack out of  
15 there.

16           The City of Philadelphia is very clear  
17 that the way that the regional planning had gone  
18 through this long multi-year process of allotting that  
19 spectrum, that there would have been a lot more  
20 spectrum available if they knew now what they knew  
21 then, and what they knew now.

22           And if we are going to have green space,

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1 this is probably the time to pull it out, because we  
2 are not going to have green space again at 800  
3 megahertz with that spectrum around. And the NPSTC  
4 spectrum is another resource that we need to use  
5 additionally. There is no doubt about it.

6 MR. MADDEN: Roger Madden, PB Farradyne,  
7 representing Florida Department of Transportation. In  
8 Florida, there is still a need for public safety  
9 applicants statewide, a statewide service,  
10 specifically with the Florida DOT, to build a  
11 statewide system, a modern day system.

12 And I would like to understand how I might  
13 apply the county-wide concept to build that state-wide  
14 system at 700.

15 MR. O'HARA: We could probably talk more  
16 off-line about that.

17 MR. MADDEN: I think it is of interest not  
18 only to me in Florida, but also to most States.

19 PARTICIPANT: A multi-state spectrum.

20 MR. O'HARA: Well, that is the reason that  
21 I wanted to talk to you off-line about it. At 800  
22 megahertz, that is one thing; and at 700 megahertz, it

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1 is a whole different issue.

2           There is an allocation of State spectrum  
3 set aside at 700 megahertz for you if you wanted to  
4 find more ways to pack it and stuff, I can help you  
5 and discuss with you about packing.

6           MR. MADDEN: I think that is a useful  
7 thing to talk about.

8           MR. O'HARA: for new York State, for  
9 example, I have packed (inaudible) and I optimized  
10 spectrum planning for the detailed population model,  
11 and these concepts can be exploited almost any way  
12 that you want it to.

13           MR. NASH: Sean, Glen Nash, State of  
14 California. Also being a State person, I have a  
15 couple of comments. One is that there is the State  
16 spectrum, and while it isn't State spectrum, it is  
17 spectrum that the States control. And we need to  
18 understand that difference.

19           But that is available for you to use, but  
20 the other thing is that, yes, you are the State, and  
21 you have a State-wide system, and by definition you  
22 are a user in every county in the State. And

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1 therefore where there is an allocation in the county,  
2 you are as valid a user of that spectrum in that  
3 county as any one of the cities is.

4 So you should be able to go even though  
5 every county has got some different allocations, you  
6 should be able to go in and argue for those. And to  
7 the extent possible, and again building State systems,  
8 it is desirable to have common frequencies and you  
9 start putting that together.

10 So maybe it is a little bit more work, but  
11 I think by doing a county by county allocation does  
12 not exclude the State. It just that you need to work  
13 your way into how do you fit into that kind of a plan.

14 So I think there are a couple of options for you  
15 there.

16 MR. O'HARA: In fact, in the State,  
17 because of the minimum allotments in the rural areas,  
18 the State is probably going to be the only people that  
19 are going to use that spectrum, and the State needs  
20 that spectrum, because there are in an area that is  
21 completely rural.

22 And if the State doesn't have 5 or 6

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1 channels covered to that county, if there is ever an  
2 incident there, there is no way that the system  
3 (inaudible), and there is always going to be an  
4 incident somewhere where you don't expect it to be.

5 MR. MADDEN: Roger Madden, PB Farradyne,  
6 again. I am specifically looking at incident  
7 management issues for the State, and that is where and  
8 when we need spectrum.

9 MR. O'HARA: Kevin, have you looked at  
10 your pool allotment?

11 MR. KEARNS: Oh, yes. I have looked at  
12 them, and looked at them, and scratched my head. I'm  
13 sorry, Kevin Kearns, Region 43. One of the things  
14 that struck me, and in both the combination material  
15 that you sent me previously, and this presentation  
16 itself has helped explain a number of things.

17 I was expecting to see a tighter  
18 correlation to population, and that is what threw me  
19 initially. Understanding the impact of the 250  
20 kilohertz separation issue on the potential assignment  
21 pool clears up a whole lot of stuff. It still leaves  
22 open the issue of how might we further maximize that

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1 given some of the terrain constraints.

2 And one of the things that is interesting  
3 in terrain models when you are doing it on a county by  
4 county basis, and again, I am not challenging the  
5 tool, because I understand that was the best that was  
6 available.

7 But if you take the populated side of  
8 Washington State, and particularly the three county  
9 area of King, Pearce and Stohomish County, represents  
10 essentially half of the population of the State, but  
11 it is all terrain isolated from the eastern portion of  
12 the State.

13 So the highest point that you would have  
14 used for your modeling is essentially a mountain range  
15 that separates the two sides of the State, where there  
16 would never be transmitter sites up there.

17 So they would actually all come down to  
18 lower elevations than was used in the model, and there  
19 would be a lot more efficiency, and we would start to  
20 see the kind of channel densities that we don't see in  
21 the pre-allocation.

22 So I guess my biggest question -- and I

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1 don't expect an answer here today, is going to be how  
2 the individual committees can use some of the good  
3 resources of the original pack to further refine so  
4 that we don't create problems for our neighboring  
5 regions. And I agree that a lot more work is going to  
6 be needed there.

7 MR. DEVINE: Steve Devine, State of  
8 Missouri. Sean, also, wasn't it originally proposed  
9 or discussed that there was going to be some 2020  
10 census projections also calculated in there. I  
11 thought at some point or another there was a future  
12 census of growth population and migration charts, and  
13 such that were going to be figured in, and some  
14 anticipation, because if you noticed, the whole  
15 northern third of Missouri 2020 census indicates that  
16 it is going to be less populated than it is now, and  
17 we are all going to move to the St. Louis and Kansas  
18 City areas.

19 So once again the population doesn't  
20 change, but it moves, and I thought that there were  
21 some projections in the calculations as well, at least  
22 to some degree.

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1                   MR. O'HARA: No, there was no projections  
2 out. Shawn Curtain (phonetic) used the 2000 census  
3 data, and a lot of the impacts from that are actually  
4 -- some projects are taken out, because the  
5 conventional model is in itself normalized in going  
6 forward.

7                   So it is a metric basically that you look  
8 to if you have channel resources available, and you  
9 look at the relative differences between the two  
10 capacity needs of the counties that could get them,  
11 and you make a decision there. It is not an absolute  
12 comparison.

13                   There was initially some -- I guess I  
14 answered your question, Kevin. The most important  
15 thing really is if you are going to deviate from the  
16 pool allotment, I think the most important thing that  
17 I can say is that you need to probably keep the pool  
18 on this. You should try to keep the pool on the  
19 regional borders.

20                   One of the main reasons why this was done  
21 was to eliminate the inner-regional fighting that was  
22 going to happen during a generation of the pool

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1 alignments, and to make sure that people didn't get  
2 left out in performing regional planning committee's  
3 way, some regional planning committees might otherwise  
4 get to their pool allotment after every other State  
5 around them had generated their pool allotments and  
6 there isn't any pool allotments left along the  
7 borders.

8 So this was a way to make sure that at a  
9 minimum that all the borders between the regions had  
10 very clear, and very fair, and very equitable sharing  
11 of the channel resources that were available.

12 Now, since you are completely isolated on  
13 the left side of that mountain range, really there is  
14 no reason to use any of the pool allotments in that  
15 area if you don't want to, because you are not going  
16 to affect anybody else.

17 So you are in a position where you can  
18 completely -- and Dave Buchanon is in a similar  
19 position. He is isolated completely by mountains and  
20 by no populated areas in Nevada and others. And that  
21 is one of the reasons for not using the pool  
22 allotments, as it doesn't really affect anything

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1       except in the Northern California region.

2                   And Steve has a plan that takes its  
3       planning over the borders, too. But you have to give  
4       careful thought about the considerations along the  
5       border. Now there is no requirement for anybody to  
6       use this as far as I can tell.

7                   And there is no requirement for anybody to  
8       use this along the regional borders, although that was  
9       discussed heavily at the meeting as the primary reason  
10      to do this.

11                   So again I think that every region has a  
12      decision to make, and if anybody has any questions  
13      about that, anything at all, on any information that I  
14      can provide to you for presentation at your individual  
15      regions to help, please contact me, because I would  
16      like to see this spectrum used as efficiently as  
17      possible from the get go.

18                   And as soon as we get more information, I  
19      would like to see it get used even more efficiently.  
20      There is no doubt about that.

21                   MR. KNIGHT:       Kurt Knight, State of  
22      Arizona. You alluded to, and maybe I missed it, but

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1 the fine tuning of your pack is the first couple of  
2 systems start going in, whether it is one slot, or two  
3 slots, or four slots, and then again back to Kevin's  
4 comment.

5 I know that in Arizona that the best  
6 information that you had is there is a couple of high  
7 sites that we will never have radios on, and when we  
8 actually define that, the system sites are actually at  
9 a lower elevation, and a slightly displaced location,  
10 can that be woven back into your work, so that again  
11 you will have another pass at which channels are  
12 available, and which counties on which borders.

13 MR. O'HARA: Yes. There is really no  
14 avenue to do that.

15 MR. KNIGHT: And the avenues are limited  
16 by funding?

17 MR. O'HARA: The avenues are limited by  
18 funding, the data collection effort being the primary  
19 reason, and the actual running of the program and  
20 tweaking the program itself is not insignificant to  
21 me.

22 MR. KEARNS: And just so that it is on the

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1 record, if a region or a group of counties within a  
2 region wanted to cooperate on doing that, they could  
3 fund that directly? This doesn't require it to be  
4 funded by NPSTC and the National Support Office, and  
5 the CADRAD database? This could be done as an  
6 individual contractual relationship?

7 MR. O'HARA: Yes, this could be done on an  
8 individual contractual relationship, and it does not  
9 have to be done by me. There is at least one other  
10 person that I can think of who is capable of doing  
11 this kind of work on such a large scale, and that is  
12 Peter McClure.

13 But packing by region, I  
14 mean, it is going to be somewhat inefficient. One  
15 thing that it would do, for example, in Arizona, is  
16 that if you had more parameters, or if you simply said  
17 combine their States, and I am going to put my sites  
18 here and these are the channels that I would like to  
19 use on these sites, automatically what I would do is  
20 identify and pull in all the channels from everywhere  
21 around you into you that are now available to you, and  
22 that would free up a tremendous number of channels.

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1 MR. DEVINE: Steve Devine, State of  
2 Missouri. One of my issues is that I have got 80  
3 percent of the population sitting on regional borders.

4 So I am going to have to -- and I will tell you right  
5 now that I will work with those people, and we will  
6 end up getting it figured out.

7 It is not going to be the channel  
8 allotments for them or for me. It is going to be  
9 different channels, but we will get it figured out.  
10 And in many of the other areas there is probably going  
11 to be some reduction, but like I said, there is plenty  
12 of spectrum up there that they have not even used yet.

13 So I am concerned about the counties in  
14 this particular scenario don't have enough channels.  
15 I am not concerned about the ones that have too much.

16 So that is why I am going to work with Kansas, and I  
17 am going to work with Illinois, and we are going to  
18 figure it out.

19 MR. O'HARA: One thing that I would like  
20 to say is that a lot of people maybe want to do  
21 different pools on this, because maybe they want to  
22 get different spectrums, and things like that, but

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1 until you build your system, you don't know what is  
2 going in.

3 And that pool allotment locks that  
4 spectrum to the ground. It is not going anywhere, and  
5 now it is in a place where no one else can use it  
6 except for the area that it is allocated for, and  
7 doing this conservatively and all these different  
8 things, and that is all fine and good.

9 But again that is money in the bank, and  
10 those pool allotments would be locked up, and they are  
11 not going to go anywhere. And when someone needs  
12 them, then you can figure out the best way to use them  
13 because you have them there in the bank, and that is  
14 an important thing to remember when you go through  
15 this.

16 I took up an awful lot of time and a lot  
17 of people have fallen asleep. Dave has fallen asleep.

18 If anyone wants to talk to me afterward, come grab my  
19 card.

20 CHAIRMAN DEMPSEY: And I move that we get  
21 Steve Devine his own microphone so that he doesn't  
22 have to keep stepping up and down. All right. Can we

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1 get a consensus then to submit this document with the  
2 attachments to the steering committee tomorrow?

3 MR. ROOT: With the changes that were  
4 made.

5 MS. RINEHART: With the changes to the  
6 Appendix out of the inter-regional --

7 CHAIRMAN DEMPSEY: Right.

8 MS. RINEHART: Because I don't think that  
9 anybody made any changes to the guidelines or any of  
10 those.

11 CHAIRMAN DEMPSEY: So we have consensus.  
12 Any old business that has to be discussed? Any new  
13 business? Then we are done.

14 (Whereupon, the Subcommittee meeting was  
15 concluded at 3:31 p.m.)

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